The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 616.—Vol. XVII. LONDON, SATURDAY, JUNE 12, 1847. [Price 6d.

PEREMPTORY SALE OF 169¼ SHARES IN MINES.

MR. CLYMA has received instructions to SUBMIT TO SALE, BY PUBLIC AUCTION, at the Royal Hotel, in the borough of TRURO, on Wednesday, the 16th day of June inst., at Three o'clock in the afternoon, the undermentioned SHARES in the following MINES—viz.:

2	Shares	in Redruth Consols, in the parish of		Redruth
1	,,	Wheal Bucketts,	,,	ditto
2	,,	Ting-Tang Consols,	,,	Gwennap
11	,,	Grambler and St. Aubyn,	,,	ditto
8	,,	West Grambler,	,,	ditto
18	,,	Besore,	,,	Illenwyn
1	,,	St. Michael Penkivel,	,,	ditto
1	,,	Wheal Henry,	,,	ditto
2½	,,	West Wheal Virgin,	,,	ditto
1	,,	Callestock,	,,	Perranzabuloe
3	,,	Great Callestick Moors,	,,	ditto
1	,,	Budnick Consols,	,,	ditto
32	,,	Wheal Prudence,	,,	ditto
3	,,	Wheal Friendly,	,,	St. Agnes
20	,,	West Wheal Rock,	,,	ditto
7	,,	Goonvrea,	,,	ditto
5	,,	West Towan,	,,	Illogan
2	,,	Wheal Prussia,	,,	ditto
8	,,	West Tolgus & Trelowith,	,,	ditto
6	,,	Bussullian,	,,	Creed
30	,,	Wheal Lemon,	,,	St. Columb
1	,,	Wheal Rialton,	,,	ditto
1	,,	Trerew,	,,	Cubert
4	,,	Trendale,	,,	Ladock
1	,,	Wheal Mary,	,,	Lanivet
1	,,	Resugga,	,,	Roche

The auctioneer, in inviting the attention of the public to the above shares, would beg to state, that several of the before-mentioned mines are situated contiguous to some of the most profitable mines in the county—thus giving to capitalists desirous of speculating an opportunity that rarely occurs.

Further particulars may be known on application to the auctioneer, No. 3, St. Nicholas-street, Truro; or to Mr. H. S. Stokes, solicitor, Truro.

Truro, June 2, 1847.

IN CORNWALL.

THE TRENGWAINTON and NANSEGLOS ESTATES, with the MANSION, OFFICES, GROUNDS, and PLANTATIONS, together with the BOSWEDNAN, PULTEGGAN, HENDRA, and BOSWARTHEN ESTATES, which form a compact property, altogether 900 acres, within two miles of the town of PENZANCE.

MESSRS. BROOKS & GREEN are instructed by the proprietor TO SELL, BY AUCTION, on Wednesday, June the 30th, 1847, at Garraway's Coffee-house, Change-alley, Cornhill, at One o'clock precisely, unless in the meantime disposed of by private contract, the above exceedingly valuable 2

FREEHOLD ESTATES.

The peculiar features of this fine property will be well appreciated by the capitalist who requires residence or investment. It comprises, in the whole, about 900 acres of most fertile land, together with an elegant mansion, embosomed in a plantation of varied timber of upwards of 30 years' growth—commanding most interesting and picturesque sea and land views, including St. Michael's Mount, Mounts Bay, the Lizard, and the Ocean. The kitchen gardens are most judiciously planned, after Ragley, and are the best in the county, with extensive ranges of hot and succession houses. This property is happily situate in one of the most healthy spots in the kingdom; the air is dry and pure, and the water of the finest quality. To the East Indian or valetudinarian, this place, it is presumed, would be invaluable—the climate is very similar to the South of France. The farm-houses, cottages, agricultural buildings, and fences, are in excellent repair; there are manorial rights and privileges, and the district is rich in minerals; granite is an export of some consequence at Penzance; immense blocks can be worked on this estate; and, from its being an inclined plane to the port, very easily shipped. The estates are well stocked with game, and the fishing is excellent.

Penzance is within two miles, and, owing to its rapidly increasing population, it renders portions of this estate most valuable as building ground; and the estate presents the best opportunity for the disposal of its produce at a first-rate market.

Printed particulars and plans may be had at the principal inns at Launceston, Bodmin, Truro, St. Ives, Falmouth, and Plymouth; the Half Moon, Exeter; the Union Hotel, Penzance; Mr. J. H. James, St. Just, Penzance; Messrs. Millett and Borlase, solicitors, Penzance; Messrs. Coode, Browne, Kingdon, and Wilson, 13, Bedford-row, London; at Garraway's, Cornhill; and of Messrs. Brooks and Green, estate agents, surveyors, and auctioneers, 26, Old Bond-street, London, at whose gallery a cosmoramic view of the mansion and estate may be seen.

TO COLLIERY OWNERS, RAILWAY PROPRIETORS, DOCK COMPANIES, ENGINEERS, CONTRACTORS, AND OTHERS.

At the COLLIERY, BISHOP MIDDLEHAM, NEAR THE FERRY-HILL RAILWAY STATION, in the county of DURHAM.

MESSRS. HARDCASTLE & ALLASON, of Sunderland, have been honoured with a commission to OFFER FOR SALE, BY PUBLIC AUCTION, without reserve, on Wednesday, July the 21st, 1847, and the following days, THE WHOLE OF THE 3

VALUABLE NEW COLLIERY PLANT,

WORKING STOCK AND MATERIALS, comprising a first-rate HIGH-PRESSURE PUMPING-ENGINE (by Skinner and Diggles), of 7-feet stroke, with 43-inch cylinder, working easily and economically, at 130-horse power, and having five boilers, 25 feet by 6, and four sets of pumps attached.

Capital HIGH-PRESSURE WINDING-ENGINE (by Fossick and Hackworth), of 5 feet stroke, with 24-inch cylinder, working at 35-horse power, having two boilers, 25 feet by 6, and rope rollers, &c., attached, all complete.

Gin, headstead, and 4 screens; 70 fathoms of main braitice, with conductors, cages, flat-ropes, &c.

New NUT COAL APPARATUS, spear and spear-plates, shear-legs, and pulley-frames.

Oak main-crab, tail-crab, shaft-crab, and several crab-ropes.

BRIDGE RAILS, many tons of metal tubbing, pumps, and pipes, of various sizes.

Tramway plates, 2750 yards of RAILWAY, 35 lbs. to the yard, with chairs, crossings, and sleepers, complete.

A number of well-built COAL WAGGONS, waggon-wheels, tubs of various sizes, Punching-machine, hand lathe, winch, smith's bellows, anvils, vices, and tools, Carpenters' benches, &c.; patterns, frames, shovels, pit-ropes, deals, battens, new and old iron, and a large quantity of other

MISCELLANEOUS COLLIERY STOCK.

All very nearly new, and of the best quality.—Catalogues will be issued in due course. Sunderland Sale Office, 16, Bridge-street, June 10, 1847.

FLINTSHIRE.

SALE OF most IMPORTANT and HIGHLY VALUABLE FREEHOLD PROPERTY, consisting of all those extensive and newly-erected premises, the

GREENFIELD ZINC-WORKS,

occupying an area of upwards of four statute acres, together with all the RAILWAYS, WHARFS, and LANDS adjoining and surrounding the same, comprehending, in the whole, nearly THIRTY STATUTE ACRES OF LAND, through the centre of which the line of the Great Chester and Holyhead Railway passes, besides having a spacious quay, or wharf, and a considerable frontage to the River Dee—thus possessing within itself the paramount advantages of water and railway communication; and immediately after the above, a SALE will be held of the whole of the MACHINERY and UTENSILS belonging to the premises, and others, removed from the Mostyn and Abbey Collieries, comprising—

A beautiful finished 300-horse power bright STEAM-ENGINE, which has scarcely been used

Two smaller BLACK ENGINES (one fixed on the premises, with force pumps, double rollers, and lathe attached, and the other just removed from the Abbey Colliery)

A large quantity of cast-iron PUMPS, from 2½ to 15 inches bore, with clack-door, bucket, and matching pieces.

Foundry and blacksmiths' fans, bellows, anvils, vices, screw-plates, taps and dies, moulds, tools, of all descriptions, and other requisites, trucks, wheelbarrows.

About FIFTY IRON and WOOD COAL WAGGONS, with iron wheels,

Large quantities of Stourbridge and Buckley fire-bricks. 4

Three LARGE WEIGHING MACHINES, and several small patent scales.

Valuable turret clock, small tell-tale clock, new and old bar and angle iron, fire-bars, pulleys, nuts, screws, bolts, washers, rivets, scrap and sheet iron, large ladles and cauldrons, very large size gas metre, piping and burners, and other miscellaneous effects, which will be submitted to PUBLIC AUCTION, by Messrs. CHURTON, about the latter end of the month of June, upon the premises, at GREENFIELD, one mile from Holywell, four from Flint, and 14 from Chester and Rhyddlan.

Full particulars of the whole, and the time of sale, will shortly be published; and in the meantime the auctioneers will afford any further information.

The vendors are willing to TREAT for the SALE of the WORKS, BY PRIVATE CONTRACT.—Chester, June 1, 1847.

FOR SALE—COLLIERIES, near BISHOP AUCKLAND, in the county of DURHAM.—TO BE SOLD BY PRIVATE CONTRACT, the UNEXPIRED TERM, held by the present lessees, in the GORDON and EVENWOOD COLLIERIES. The above collieries are now in work, and are so situated as to command considerable export, as well as land sale, trade. These advantages will be materially increased by the formation of the Auckland Branch of the York and Newcastle Railway, and the new railways leading to the south and west—for all of which Acts are obtained. By the first, great facilities will be obtained for shipments on the Tyne and Wear. For further particulars apply to Mr. Brogden, Stockton-on-Tees. 5

GEORGIA TIN MINES, divided into 2048 shares, and worked ON THE COST-BOOK SYSTEM.

The necessary arrangements having been made for carrying out the operations of the Company, all future communications are requested to be addressed to the offices of the Company, 21, THROGMORTON-STREET, LONDON, where the specimens and plans, with the correspondence, may be seen. 6

PEREMPTORY SALE OF COLLIERY EFFECTS, at FLINT, by Mr. JAMES WILLIAMS, on Tuesday, the 15th, and Wednesday, the 16th inst., commencing each day at Twelve o'clock precisely, on the premises, at the FLINT MARSH COLLIERIES, situate close to the borough town of Flint (with a shipping stage thereunto belonging), unless previously disposed of by private contract, of which due notice will be given, the whole of the valuable 7

PUMPING AND WINDING ENGINES,

WEIGHING MACHINES, BORING AND BLASTING TOOLS, RAILWAY AND TRAM WAGGONS and BASKETS, TURNING LATHE, FLAT and ROUND CHAINS and ROPES, CAST and WROUGHT-IRON RAILS, SCRAP, CAST, WROUGHT and USEABLE IRON, JOINERS' and SMITHS' TOOLS, OFFICE FURNITURE, CARTS, GEARS, and OTHER EFFECTS, belonging to the concern—comprising

One excellent 19-inch cylinder CONDENSING PUMPING and WINDING-ENGINE, 4 feet stroke of piston, complete, with tubular and balloon boilers.

Lift of 8-inch PUMPS, winding apparatus, &c.; one ditto winding-engine, 25-inch cylinder, 3-feet 6-inch stroke, complete, with tubular boiler, nearly new, fly-wheel, winding drum, and about 120 yards of new flat chain, &c.; one 4½-inch cylinder high-pressure steam-engine, 16-inch stroke of piston, new and complete, with the exception of a boiler; one 12-inch ditto, 4 feet stroke of piston, new, and nearly complete; part of a double-power condensing steam-engine, 29-inch cylinder, 4-feet stroke, consisting of air-pump and condenser, fly-wheel, shaft and crank, piston and rod, connecting-rod, parallel motion, air-pump bucket, and a large quantity of the hand gear, valves, and seats; the cylinder, air-pump, and condenser, nozzles, valves, &c., of a 28-inch condensing steam-engine; capstan, shears, and whim; flat and round chains and ropes; two capital weighing machines, up to 8 tons each; powerful iron winch; ditto beams and scales; ditto iron and wooden blocks; boring and blasting tools; railway and tram waggons and baskets; wheels and axles; a great quantity of wrought and cast-iron rails; hammered scrap, round, flat, and square iron; scrap cast and wrought ditto; old and new brass; a large quantity of new riddles; coal baskets; shovel and pick stails; pump and gear leather; large quantity of weights; strapping plates; very valuable assortment of powerful screw plates, taps and dies; sawn and prop timber; about 2000 C. S. bricks; wooden sheds, basket rods, and stove, &c.

Mr. Wilson, on the premises, will show the respective lots, and descriptive catalogues of the whole may be had five days prior to the sale, at the Royal Oak and Ship Inns, Flint; or of the auctioneer, at his office, Maes-y-Dre, Holywell, of whom further particulars may be known.

STEAM-ENGINES AND OTHER MINE MATERIALS FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, at TRETOIL MINE, near BODMIN, Cornwall, the undermentioned

MINE MATERIALS—viz.:

1 66-inch cylinder STEAM PUMPING-ENGINE, with two boilers, about 20 tons, complete
1 Other boiler, about 12 tons
1 21-inch cylinder STEAM PUMPING-ENGINE, without boiler
44 17-inch pumps, 9 feet long
2 17-inch plunger poles, to go 7 feet stroke 8
2 16-inch cases for ditto
2 Stuffing-boxes for ditto
2 Windbores, ditto
2 H-pieces and doors 2 Door-pieces, ditto
5 12-inch pumps, 9 feet long
1 11¼-inch door-piece
6 11¼-inch pumps, 9 feet long
1 10½-inch working barrel 1 10-inch ditto ditto
1 11¼-inch windbore 4 9-inch pumps, 9 feet long
1 6-inch windbore
1 13-inch plunger-pole, 9 feet long, stocked complete
1 13-inch case, with stuffing-box attached, complete
1 8-inch plunger-pole, 8 feet long, stocked 1 6-inch ditto ditto
1 6-inch H-piece and door of ditto, door-piece, &c.
1 6-inch case and stuffing-box, complete 1 6-inch ditto windbore
A grinder, and 16-feet water-wheel, complete, with stamps and frames
A large balance-bob, with queen post, gudgeon, plever blocks, strapping plates, holding-down bolts, &c.
Other smaller balance-bobs
A large capstan, with oak axle Other smaller capstans
A shears, 60-feet high Another smaller shears
130 Fathoms 13-inch capstan rope, nearly new
130 Fathoms 12-inch capstan rope
Whims Whim ropes
16 Strapping plates of hammered iron, for main-rods
18 ditto doubled rolled, for ditto
Main rods, staples and glands, rod bolts
Strapping plates Flat-rod pulleys
Railroad iron, tram waggons, air pipes, ladders
Much useful mine timber, old pumps, and various other things

The pitwork, and much of the other materials are nearly new, and in good condition.

Apply to Mr. Henry Thomas, 8, George-yard, Lombard-street, London; Mr. George Geach, Bodmin; or to Capt. Henry Williams, at the mine.

Dated June 8, 1847.

STEAM-ENGINES FOR SALE—TWO CONDENSING ENGINES (match), by Murray and Fenton, Leeds—cylinders 33-inch diameter, stroke, 6 feet, with three boilers and connections thereto; also TWO FORCE PUMPS, 18-inch diameter, with a 5-feet stroke each; and ONE FORCE PUMP, 14-inch diameter, with a 4-feet stroke; the whole in capital working order, and admirably suited for mining or mill-work.—Apply to the Engineer of the Phœnix Gas Company, west side of the Bridge-road, at Vauxhall. 9

TO BE SOLD.—ONE HIGH-PRESSURE STEAM- ENGINE, of 40-horse power, calculated at 30 lbs. pressure to the inch. This engine is quite new, and very strongly built, having been intended for driving heavy machinery, and is not now required.—For particulars apply to Mr. Matthew Smith, No. 26, Button-lane, Sheffield. 10

TO BE SOLD, BY PRIVATE CONTRACT, at GODOL- PHIN MINES, ONE 36-inch PUMPING-ENGINE, 6 feet stroke, equal beam, boiler, 8 tons, balance-bob, and first piece of rod.

ONE 24-inch STAMPING-ENGINE, 8 feet stroke, boiler, 11 tons.
ONE 24-inch WHIM-ENGINE, 6 feet stroke, boiler, 4 tons, and cage.
ONE 18-inch WHIM-ENGINE, 4 feet stroke, boiler, 7 tons, and cage.

Application to be made to Capt. R. Williams, on the mines. 11

Dated Godolphin Mines, Helston, Cornwall, May 27, 1847.

TO BE SOLD, BY PRIVATE CONTRACT, the CAST- IRON AXLE of a LARGE WATER-WHEEL, good as new, with TWO CRANKS, BRASSES, &c.—The axle has sockets for 14 arms on each side, and is adapted for having built on it a wheel of 40 to 50 feet diameter, and 5 feet breast, and is capable of any extension of the width of the breast, by the addition of a centre-piece. The whole weight of castings is about 14 tons. The axle lies on the Wheal Betsy Mine, near Tavistock, Devon, and about 9 miles from the navigable River Tamar. 12

For viewing the same, and further particulars, apply to Mr. Anthony Rowse, Marytavy, near Tavistock.—Tavistock, June 10, 1847.

IRONSTONE AND COAL.—TO BE LET, ON LEASE, the WORKING of the IRONSTONE and COAL on the BRENCKBURN ESTATE, in NORTHUMBERLAND. There is an abundance of LIMESTONE, FREESTONE, and CLAY.—For particulars apply to Messrs. Druce and Sons, solicitors, 10, Billiter-square, London, where samples and analyses may be seen. 13

NORTH WALES—CAPITAL OPPORTUNITY FOR INVESTMENT.—TO BE DISPOSED OF, BY PRIVATE TREATY, all that rich and valuable vein of COPPER ORE, extending under a surface of about 500 acres, comprising the lands known by the names of GARTH, CELIOG, and CRAFAANT, in the parish of Llanbedr, between Barmouth and Harlech, in the county of Merioneth (300 acres of which are held on lease from the Crown, for the term of 21 years, of which 19 are unexpired, subject to a royalty of 1-10th). This lease was granted to the proprietor of the remaining 200 acres, who now offers for sale, in perpetuity (but subject to a royalty of 1-10th), the portion of the vein which extends under his own land (the above-mentioned 300 acres), and his right during the unexpired term of 19 years, to the portion of the vein that extends under the remaining 200 acres. 14

The vein extends up the slope (which is 560 yards in length) of a mountain, at the top of which it appears above the surface, where it is nearly 5 feet in thickness, and contains copper ore of the richest quality—yielding from 10 to 20, and 25 per cent. of pure metal, and bears appearances, such as to warrant the expectation of its producing an immense quantity of the richest ore.

The vein has never been worked, but merely tried, by driving an adit 53 ft. in length, from the side of the mountain, a few yards below the summit, so as to cut the vein at right angles. The facilities and advantages for the conducting of any operations are of the most peculiar description—the direction of the vein admitting of levels being driven to it, at right angles, which will always keep the works in a dry state, and thus render the construction of expensive machinery unnecessary.

At the foot of the mountain there is a large flat, past which runs a river, suitable for the working of machinery. The flat is admirably adapted for the formation of a wash, for the purpose of cleansing and dressing the ore—an incline could be easily made from the levels to it.

It may be well to add, that the distance from the excellent port of Mochras is only three miles—in fact, there are few, if any, copper mines in Wales that possess such very peculiar advantages. An inspection of the vein and the surrounding neighbourhood (which will at any time be readily shown), would substantiate the correctness of the above statement.—Samples of the ore may be seen, and further information obtained, on application to Messrs. Thorley and Robinson, solicitors, 3, St. James's-square, Manchester; or to Mr. Ll. C. Lewis, mine agent, Barmouth, who will show the property; also, to Messrs. Faulkner and Co., solicitors, Bedford-row, London.—May 18, 1847.

LOST OR STOLEN—FIVE SHARES (Nos. 3131-3135) in the WHEAL CURTIS COPPER MINING COMPANY—Notice of which has been given to the company, and the proper means taken to prevent them from being dealt with except by the owner.—Communications may be addressed to "B. D.," at the company's office, Gresham Rooms, Basinghall-street. 15

ST. JOHN DEL REY MINING COMPANY.—TO BE SOLD, FORTY SHARES in the ABOVE COMPANY, at £7 per share.—Apply to "M. B.," at the office of the *Mining Journal*, 26, Fleet-street, London. 16

SINKERS WANTED, at the SNIBSTON COLLIERIES, near Ashby-de-la-Zouch, to sink TWO SHAFTS, each to the depth of 200 yards.—Applications to be made to Mr. Vaughan, at Snibston. 17

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 18

JONATHAN DAVEY, MINE AGENT, SURVEYOR, AND SHAREBROKER,
MATTHEW-STREET, TAVISTOCK. 19
Mines surveyed, inspected, and reported on, at the shortest notice; plans, sections, and dialling performed, by day or contract.

WILLIAM H. SMITH, MINING SHARE AGENT, 10, *WARNFORD-COURT, THROGMORTON-STREET, LONDON.* 20
MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS.— N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain. 21

THOMAS P. THOMAS, MINE AGENT, AND DEALER IN RAILWAY AND OTHER SHARES.
18, *THREADNEEDLE-STREET, LONDON.* 22
BUYER in Wheal Trelawny and Wheal Mary Ann, at fair market prices.

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.
THREE KING'S COURT, LOMBARD-STREET, LONDON. 23

MESSRS. WINSTANLY AND CO., SHAREBROKERS, Inform their friends and the public, they BUY and SELL every description of RAILWAY SHARES on the most advantageous terms; they also make advances upon the deposit of scrip and shares for periods as may be agreed.
6, Bank Chambers, City. 24

JAMES LANE, MINING SHARE DEALER, 75, *OLD BROAD-STREET, LONDON.* 25

MINING ADVENTURERS' SUBSCRIPTION ROOM, ORIGINAL REGISTRY OFFICE FOR THE SALE AND PURCHASE OF MINING SHARES.
CROSSMAN, SOMMERS, AND CO., AGENTS,
28, *THREADNEEDLE-STREET LONDON.* 26

SHARES FOR DISPOSAL.

Great Wheal Frederick Tin Mine	Wheal Mary and Elizabeth
Devon and Courtenay Consols	Coombe Mine
North Eastern Mining Co. of Ireland	Wheal Rose
South Wheal Maria	Pennant Mining Company
Wheal Susan—Holmbush	Abergwessin Silver Mine
Wheal Rose Consols	New East Crowndale
Wheal Beam Tin Mine	East Wheal Rough Tor
Bedford United Mines	Grambler and St. Aubyn
Alfred Consols	North Wheal Robert
Dartmoor Consols	Great Wheal Rough Tor

ANGLO-MEXICAN MINING ASSOCIATION, 5, Broad- street-buildings.—The ANNUAL GENERAL MEETING of the proprietors of the Association for Assisting in Working the Mines of Mexico, and other parts of Spanish America, will be HELD at the company's office, 5, Broad-street-buildings, on Wednesday the 7th day of July next, at One o'clock precisely. A. GODFREY, Secretary. 27

IMPERIAL BRAZILIAN MINING ASSOCIATION, Winchester House, 52, Old Broad-street, London, June 7, 1847.—The directors of this association have, under the powers vested in them by the deed, made a CALL of £2 on each of the shares of this association, and the proprietors are requested to PAY the same on their respective shares, on or before the 8th day of July next, to the London Joint Stock Bank, Princes-street, the bankers of the association. No transfer can be made until payment of the call. GEORGE THOMAS, Acting Director. 28

ALBERT ADVENTURE—NOW IN WORK, ON THE COST-BOOK PRINCIPLE.
In 1000 shares.—Deposit 5s. per share. 29
NO FURTHER APPLICATIONS for SHARES will be RECEIVED after WEDNESDAY, the 30th inst.
Applications for shares are to be made to Mr. James Lane, sharebroker, 75, Old Broad-street, London: the Purser, Mr. F. Harvey, Hayle, Cornwall; or the London Secretary, Mr. W. Witcomb, Johnson's Chambers, 167, Fleet-street, London, of whom the prospectus may be obtained.—The prospectus can also be had at the office of the *Mining Journal*, 26, Fleet-street, London.

CRAIG DDU SLATE COMPANY, MERIONETHSHIRE. —The DEED OF SETTLEMENT of this company having been approved by the Registrar of Joint-Stock Companies, the directors will proceed to ALLOT the SHARES on Friday, the 18th day of June inst.—All further applications for shares should, therefore, be made before that day, addressed to the secretary, at the office of the company, 35, Moorgate-street; or to Mr. Farrar, solicitor to the company, Doctors' Commons. 30
Dated this 8th June, 1847.

NORTH WALES MINING COMPANY, COUNTY OF MERIONETH.
Divided into 12,500 shares, limited to £10 each, and carried out upon the Cost-book System, with a deposit of £2 10s. per share.
OFFICES, No. 2, NEW BROAD-STREET, LONDON. 31
Applications for shares and prospectuses to be made at the office.
W. T. GRIFFITHS, Purser.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,
23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,* 32
to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

BRUNTON'S PATENT ORE-DRESSING FRAME.— These FRAMES, for DRESSING TIN, COPPER, and OTHER MINERALS, having been in use, and given satisfaction, on several mines, during the last two years, the PATENTEE begs to call the attention of all Adventurers and Mine Agents to the great advantages, both as regards economy of labour and the great increase of mineral obtained by their adoption. The following gentlemen can certify as to their utility:—Thos. Bolitho and Sons; P. N. Johnson, Esq.; Capt. Jos. Vivian, Cook's Kitchen Mine; Capt. R. Kernick, St. Ives Consols; Capt. R. Edwards, Wheal Franco; Capt. W. Teague, Wheal Grace; Capt. James Miners, and Capt. Matthew Rogers, Carn Brea Mines. 33

PATENT GALVANISED IRON AND WIRE ROPE WORKS, *MILLWALL, POPLAR.*
ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £30, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging. 34

IMPORTANT TO RAILWAY COMPANIES.

PATENT KAMPTULICON COMPANY, 18, CORNHILL. 35
This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic planking is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur.
By order of the board, F. G. GREVILLE, Secretary.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public. 36
References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

Society.	Address.	Day.	Hour.
Royal Botanic	Inner Circle, Regent's-park	Saturday	3½ P.M.
Western Scientific Institut.	Leicester-square	Monday	8½ P.M.
Geographical	3, Waterloo-place	Monday	1 P.M.
British Architects	16, Grosvenor-street	Monday	6 P.M.
Linnæan	Soho-square	Tuesday	1 P.M.
Civil Engineers	23, Great George-street	Tuesday	8 P.M.
Society of Arts	Adelphi	Wednesday	8 P.M.
Geological	Somerset-house	Wednesday	8½ P.M.
Royal	Somerset-house	Thursday	4 P.M.
Antiquaries	Somerset-house	Thursday	8 P.M.
Asiatic	14, Grafton-street	Saturday	2 P.M.

ROYAL COLLEGE OF CHEMISTRY.

The first annual general meeting of members was held on Monday, at the college in Hanover-square.—B. B. CABBELL, Esq., M.P., presided.—Mr. JACKSON (the secretary) read the report of the council, and also that of Dr. Hoffman, with regard to the progress of instruction in the college. The former opened with the announcement of the completion of the laboratories, the first stone of which was laid by Prince Albert in June last. The council congratulated the members upon the appreciation which the institution had met with from the public. The number of students at present in the college was 32, making no less than 147 from its establishment. A member of the college had expressed his intention, as soon as the college was free from debt, to invest the sum of 1000*l.* as a premium for discoveries in chemistry effected therein. Two offers had also been made of donation to the amount of 100*l.* respectively, for the purpose of raising in each case 1000*l.*, as soon as other persons would come forward to complete the sums. Dr. Hoffman's report announced the entire success of all the arrangements in the new building, and the progress of the students in various new chemical discoveries, which he conceived might lead to very beneficial results. The total receipts of the institution last year, including the previous balance, amounted to 6846*l.* 7*s.*; out of which, a present balance remained of 622*l.* 18*s.* 7*d.* The reports, together with the statement of accounts, were adopted unanimously; which was followed by the re-election of the council—with some additions—in the place of several gentlemen who were removed from the board to be included in the list of vice-presidents; and, also of the officers of the company, to all of whom complimentary votes were awarded. The business being concluded, some conversation ensued on the subject of the 1000*l.*, which it was proposed to invest as a prize for chemical discoveries, during which Mr. Blakemore, M.P. (who was understood to be the donor), explained that the premium was to be offered in particular for the discovery of any means which should render iron, when applied to all ordinary purposes, as little liable to rust or corrode as copper.—The meeting then separated.

GEOLOGICAL SOCIETY.

JAN. 6.—LEONARD HORNER, Esq., (President) in the chair.

"On the Classification of the Lowest Fossiliferous Rocks of North Wales," by Sir R. I. Murchison. The author explains the grounds on which he is compelled to dissent from the recent proposal of Professor Sedgwick made to the Society; and shows that its adoption would break down the scientific meaning hitherto attached to the term "Silurian System." After several years of labour and preparation, that system was propounded in 1835 as a natural history group, which, though characterised by a community of animal forms, was separable into upper and lower divisions. The name Silurian having been given to the whole, that of Cambrian was subsequently applied by Prof. Sedgwick to the still lower adjacent slaty rocks of North Wales; it being then hoped, and believed that, according to analogy, such lower rocks would be found to be distinguishable from the Silurian, by a peculiar suite of organic remains. Researches, however, having now proved that the so-called Cambrian rocks are also tenanted by the same fossils, which have for many years been recognised as Lower Silurian types, and these remains having further been shown to occupy the lowest fossil-bearing strata in Russia, Sweden, Norway, and America, Sir. R. Murchison maintains that this name must be adhered to in reference to all British, as well as foreign strata, which are occupied by the fossils, originally described by him as Lower Silurian. In conclusion, Sir R. Murchison points out that if, in this instance, the principle of strata identified by their fossils be departed from, by merging his well-known Lower Silurian type in a name applied to a group of rocks which has never yet been described, as containing fossils of its own, the very term Silurian would be excluded from the geological maps of various regions of Europe and America, on which it has been inserted after much labour; and that, thus deprived of their lower and larger half, the Silurian rocks would be reduced, in many tracts, to a small and insignificant band, quite unworthy of being entitled a system.

JAN. 20.—"On the Wave of Translation in connection with the Northern Drift," by W. Whewell, D.D. In this memoir the author, after referring to the northern drift, and the causes that had been suggested for explaining its phenomena, and stating the meaning and properties of the wave of translation, proceeded to discuss some of the results of its operation. He assumed, for this purpose, a certain quantity of material to be distributed within a given area; and showed, by simple calculation, different expressions for the amount of paroxysmal force that would be needed. He considers, however, that paroxysmal force is necessary; but, that a movement, although small, will, if sudden, produce effects resembling those to be accounted for. He concluded by observing, that a wave of translation differs but little from the *débâcles* assumed by earlier geological speculators.

"On the slow Transmission of Heat through loosely coherent Clay and Sand," by Mr J. Nasmyth. The object was to describe an instance of the low conducting power of clay and sand, in which a thickness of half an inch of such matter intercepted the heat of a mass of 11 tons of white-hot melted cast-iron for 20 minutes, without the heat on the outside of the vessel being sufficient to pain the hand. The author added some remarks as to the bearing of this fact on geological theory. A notice was read "On a New Clinometer," by Mr. R. B. Grantham—being a description of the instrument which was presented to the society.

FEB. 3.—"On the Probable Age of the London Clay, and its relations to the Hampshire and Paris Tertiary Systems," by J. Prestwich, jun., Esq. Omitting general details of structure, the author of this communication proceeded to show that the thick argillaceous mass of marine strata on which London is situated, and whose organic remains are well known by the collections from Highgate and Hampstead, and from the cliffs of Sheppy, is not, as it has hitherto been considered, synchronous with the *Calcaire grossier* of Paris, nor yet with the clays of Barton, and sands of Bracklesham; but that it is of older date than these, and occupies a lower position in the Eocene series.

APRIL 14.—"On the Structure and probable Age of the Coal-field of the James River, near Richmond, Virginia," by C. Lyell, Esq. This coal-field, which is about 20 miles long from north to south, and from 4 to 12 miles in breadth from east to west, is situated 12 miles west of Richmond, in Virginia, in the midst of a granitic region. The rocks consisting of quartzose grits, sandstones and shales, precisely agree in character with the ordinary coal-measures of Europe. Several rich seams of bituminous coal (the principal one being occasionally from 30 to 40 ft. thick), occur in the lower division of the strata, which are arranged in a trough, and are much disturbed and dislocated on the margin of the basin, where they have a steep dip, while they are horizontal towards the centre. The fossil plants, which have been determined by Mr. C. Bunbery, differ specifically, and most of them generically, from those found fossil in the older or paleozoic coal formations of Europe and North America; and resemble, as Prof. W. B. Rogers first truly remarked in 1840, the plants of the oolite, of Whitby, in Yorkshire; some few, however, being allied to fossils of the European trias. From the upright position of the Calamites and Equisets, Mr. Lyell infers that the vegetables which produced the coal, grew on the spots where the coal is now found, and that the strata were formed during the continued subsidence and repeated submergence of this part of Virginia. The shells consist of countless individuals, of a species of Posidonomya, much resembling *P. minuta* of the English trias. The fossil fish are homocercal, and differ from those previously found in the new red sandstone (trias?) of the United States. Two of them belong to a new genus, and one to Tetragonolepis, and they are considered by Prof. Agassiz, and Sir P. Egerton, to indicate the liassic period. The analysis of the coal made by Dr. Percy, and Mr. Henry, shows that it contains the same elements—carbon, oxygen, hydrogen, and nitrogen, in the same proportions as the older bituminous coal of Europe and North America. Alternating layers of crystalline coal, and others like charcoal, are observed in many places; and in the charcoal, Dr. Hooker has detected vegetable structure, not of Ferns or Zamites, or any Conifer, but perhaps of Calamites. The coal yields abundance of gas used for lighting the streets of New York and Philadelphia, and some fatal explosions have taken places in the mines, some of which are 900 ft. deep. Volcanic rocks, dikes, and beds of intrusive greenstone, intersect the coal measures in several places, hardening the shales, and altering the associated coal, the latter being in some places turned into a coke used largely for furnaces. The author concludes by expressing his opinion that the evidence of the fossils, although some of them belong to forms usually found in the trias, preponderates upon the whole, in favour of regarding the coal-field of the James River, as being of the age of the inferior oolite and lias.

"Descriptions of Fossil Plants from the Coal-field near Richmond, Virginia," by C. J. F. Bunberry, Esq. The author describes 15 different forms of vegetable remains; of which, however, only 10 are sufficiently well preserved to be determined with anything like precision. Six of them are ferns, of which there are new species—and one of these seems not to be referable to any of the established genera; one of the ferns appears to be identical, with a species characteristic of the oolites of the Yorkshire coast. There is one species of Equisetum, undistinguishable from one of the most common fossil plants of Whitby; one, or perhaps two species of Calamites; two (which are possibly not distinct) of Zamites—the remainder are obscure impressions, of an equivocal nature. From a comparison of these vegetable remains, with those found in European strata, of which the geological position is well known, the author thinks it may be concluded with tolerable certainty that the Richmond coal-field is of later date than the great carboniferous system; and that it must be referred either to the Jurassic or the Triassic series—more probably to the former.

INSTITUTION OF CIVIL ENGINEERS.

PRESIDENT'S CONVERSAZIONE.

The second *conversazione* of the season, given by the president, Sir John Rennie, to the members of the Institution of Civil Engineers, his friends, and the eminent in the scientific and literary world, took place on Saturday evening, the 5th inst., and we never before remember to have seen one so brilliantly attended, or at which there was so much to amuse and instruct the visitors: a report of the first *conversazione* appeared in last week's Journal.

The models and works of art had been entirely re-arranged, and considerable additions had been made to the collection.

Among the new works of art we noticed portraits of Mr. Aaron Manby, and the Hon. Mrs. Boyle, by Mr. Boxall. Some oil sketches by J. Wood; an admirable chalk sketch of a dog's head, by Edwin Landseer; water-colour and chalk sketches by Scanlan, Oliver, Duncan, Digby Wyatt, Johnson, Alf. Crowquill (Forrester), Baugniet, Robertson, & Phillips.

A curious clock, made by Tompion, in 1670, and presented by Charles I. to the Duchess of Cleveland, was exhibited by Mr. Vulliamy.

M. Fraget contributed some extraordinary specimens of gold electro-deposit for ornamental work for clock cases, &c. It appeared from the statements that this introduction would make a great diminution in the price of this kind of work.

A collection of fossils, from the Oxford clay, at Trowbridge, made by Dr. Mantell during the excavations on the line of the Wilts, Somerset, and Weymouth Railway, appeared to excite much attention among the geologists—as did two casts of impressions of the feet of some unknown species of animal, found in the new red sandstone in the United States, and recently transmitted to Dr. Mantell.

Among the additions were several working models, by West, of the vibrating and stationary steam-engines, stern propellers by Mr. Hays—much resembling that of Woodcroft, only furnished with means of preventing the rush of water against the propeller when not in use, and rendering the dead wood an uniform surface when sailing.

A revolving disc pendulum, by Mr. Fronde, for rendering uniform the circular revolution, under considerable variation of the maintaining power.

Otis' American Excavator, which was worked on the Eastern Counties Railway, by Mr. Hyde, and that of Messrs. Barber, Brothers, invented by Colonel Hamilton, and now in construction for dredging the port of Toulon, were appropriately placed with Prideaux's Excavator, mentioned at the last *soiree*.

The Electric Telegraph Company contributed a new and complete assortment of electric clocks and telegraphs.

A model of the Somerset-bridge, of 110 feet span, by Mr. Brunel, on the line of the Bristol and Exeter Railway, as an example of the strength and simplicity that may be attained by well-constructed trussed timber bridges, even for large spans.

Fuller and De Berque's application of thick rings of vulcanised India rubber, alternating with metal discs, to form buffer springs for railway carriages.

Clarke and Varley's Patent Resilient Atmospheric Railway, and application of pneumatic pressure to the pile driving machine.

Davison's system of cleansing casks, as used at Truman and Hanbury's, and other breweries.

JUNE 8.—Sir JOHN RENNIE (President) in the chair.

The paper read was "On the Expansive Action of Steam," by Mr. J. M. Heppel, Grad. Inst. C.E. The object of the paper was to deduce a more exact formula than those now in use for the dynamical effect developed by steam in expanding from one pressure to another. The usual method of computing this effect neglects the influence of the variation of temperature, which always accompanies change of density, and which has been shown to modify considerably the corresponding pressure. M. de Pambour, however, has, by combining Gay Lussac's formula for the relation between temperature and density under uniform pressure, with that of Boyle for the relation between density and pressure under uniform temperature, deduced a formula containing the density, pressure, and temperature, from which any two being given, the third may be deduced.

What was further done in Mr. Heppel's paper, was to combine this formula with one by Mr. Scott Russell, expressing the relation between the pressure and temperature, and by this means to eliminate the latter, and obtain a formula containing only the pressure and density. From this formula another was easily obtained, showing the total dynamical action developed during expansion from one pressure to another, and the results were given in a tabular form, exhibiting—

1. The pressure in lbs. per square inch.
2. The relative volume, or ratio of the volume of steam, to that of the water which produced it.
3. The dynamical effect before expansion, or the number of lbs. raised one inch by the evaporation of each cubic inch of water.
4. The dynamical effect during expansion, or the number of lbs. raised one inch by the steam produced from one cubic inch of water in expanding from a pressure of 100 lbs. per square inch to the particular corresponding pressure. The dynamical effect in expanding from any one pressure to any other, must be clearly expressed by the difference of the corresponding numbers in this column.

Part of the remainder of the paper was devoted to showing that whilst the performance of engines could not possibly be expected to exceed the results ascertained as above, it should not fall far short of them in the case of engines of good construction. In conclusion, a simple method was suggested of ascertaining the magnitude of all the forces in action during the working of the Cornish engine, independently of the indicator.

In the course of the paper, the fallacy of the theory of what had been termed the "percussive action" of steam was ably exposed; and although, from the paper being full of mathematical formula, it was not well adapted for being read at a public meeting, it evidently possessed great merit as an investigation of an important subject.

It was followed by a short paper, also "On the Expansive Action of Steam," by Mr. Tate, mathematical master of the Training College, Battersea. Its object was to demonstrate and apply a formula some time since discovered by the author, expressing the law of the expansion of steam, and at the same time to establish certain general equations relative to the work of steam, applicable to all formulæ professing to give the law of volume and pressure. It also examined and corrected Pole's formula, which, although a decided improvement upon Pambour's, was stated to be not sufficiently accurate for pressures above 70 lbs., or below 16 lbs.

M. Piarget exhibited in the library, after the meeting, specimens of his improvements in producing ornamental metal surfaces, formed by the deposition of metals during the electrotype process, which is conducted in a peculiar manner, with mixtures adapted to the effect desired to be attained. The form also of the bath is peculiar, and when the plate is taken out of it, and off the model, it exhibits a burnished polish, or a dead appearance, according to the preparation used. The metal thus produced is stated to be of a much better description than metals which have not undergone such process, as it is more flexible, and is capable of withstanding the action of heat without destroying the form or the copper, and the surface will not tarnish when exposed to the air. Portions of any pattern can also be silvered by a similar process; and the general expense is about one-third of that of engraving or chasing, while the boldest or most minute patterns can be equally well produced.

The paper announced to be read at the meeting of Tuesday, June 15, was "On the Law which governs the Discharge of Elastic Fluids under Pressure through Short Tubes and Orifices," by Mr. W. Fronde, M. Inst. C. E.

IMPROVEMENTS IN THE DRY GAS-METER.

On Monday evening last, at the Western Literary and Scientific Institution, Mr. Defries, the well-known engineer, of St. Martin's-lane, Charing Cross, lectured on the impurities of coal-gas, as supplied for public and private illumination; and the destructive effects of the ammonia and sulphuretted hydrogen contained therein upon the metal of which the gearage of dry gas-meters is composed. He introduced his subject by calling attention to its great importance, and observed, that although many attempts had been made to produce a perfect dry gas-meter, they had all signally failed; while he hoped to prove to them that evening, that the last of his improvements—(a meter on which principle he should have the honour to submit to their notice)—was in every respect perfect in its registration, and so constructed, that the most impure gas could have no effect on the gearage, as it was entirely isolated. Of the numerous gas establishments in London, some, he was happy to bear testimony, produced gas perfectly good and well purified; while others, he was sorry to say, supplied an article equally bad: in the former he had had meters for six or eight years in use, as perfect, as far as corrosion went, as they were the first day, while in the latter, they would be completely destroyed in six months. In illustration of this fact, Mr. Defries produced a meter which had been in use at Mr. Rickett's, in Agar-street, four years, and was in perfect order and clean; while another (from what locality did not transpire) which had been employed only six months, was actually rotten. He then explained, that the metal of which the valve was composed in his former meters was unaffected by sulphuretted hydrogen, or ammonia, but it being soft and brittle, it could not be used for the gearage, and thus it was that the latter was always liable to be affected. In his new meter he had remedied this defect, by placing the gearage in a chamber above the body of the meter, and connected to the parallel motion of the diaphragms below, by an upright shaft, passing through a stuffing box. The triple parallel motion produced by the three diaphragms being by the aid of cranks converted into rotary motion, caused the shaft to revolve, which, by a train of wheels, acted on the index, and registered the quantity passed. A light was here applied all round the stuffing-box, and among the gearage, which proved perfectly free from leakage. (Applause.) Mr. Defries said, that he had for many years paid attention to the generation and purification of coal gas, and there was no manufacture in which there was a greater certainty of good results, if proper attention was paid, the purifiers changed at proper intervals, and to study the *quality* of the gas in preference to *quantity*. Gas engineers should superintend the details of the works much more than was customary, and not leave to others (often incompetent) what they should attend to themselves. (Applause). It was not only the meters which were affected, but the fittings were continually out of order, from condensation and corrosion. He mentioned a circumstance of Mr. Ries, of the great cigar divan; he formerly had two 50-light water meters, and that gentleman would hear him out when he said, he was then always sending for the fitter. Seven years ago, he put up two of his dry gas-meters; the fittings had had no repairs done to them since, and the meters were perfectly sound. At Covent Garden Theatre he had, by direction of the Chartered Gas Company, put up three dry meters for 300 lights each; at the House of Detention, one 300-light meter; at the Thames Tunnel, one 150-light meter, and 1·100—the registration of which was taken daily, and found to be correct. They had been in use four years night and day, which is equal to 30 years of ordinary use; and, on a late inspection, it was found that 10,000,000 ft. of gas had passed through. He had extensively supplied the club-houses, the Houses of Parliament, the Government dockyards and public offices, and was supported by every important gas company in Britain. With respect to the water meter, as long as the water-line was preserved, it would register correctly, but, from condensation and evaporation, this was continually altering; and he was sorry to say that a portion of the public fraudulently tampered with the water meter, and as, since Mr. Crole's lectures upon it, these frauds appeared to have extended, he would decline saying any more, than that Mr. Clegg, the inventor of the first water meter, had stated that the wet meter has several imperfections that cannot be overcome; and has, in consequence, devoted himself for years past to the dry meter, and, like him, almost all the wet meter makers have turned their attention to it. Mr. Defries then exhibited various dry gas-meters, the first of which was that of the "Dry Meter Company." This had but one diaphragm, and made the lights jump. A second one of this company's had two diaphragms; one of Edge's; one of Crole's, with two diaphragms; one of Sullivan's, Sugg's, and others. The only meters he could not exhibit were those of Mr. Clegg and Mr. Hutchinson. He expected to have had one of Mr. Hutchinson's to show to the meeting, and to illustrate upon it; but, although he had written on Friday last to request such, that gentleman did not accede to the request. But, as he was going shortly to deliver a lecture on gas, and to show the process through glass apparatus, he pledged himself to the meeting to produce one of Mr. Hutchinson's, or rather one from that gentleman's establishment, which is now called the "British Dry Gas-Meter Company." He said some of these were so much alike, that he could not distinguish in what particular detail the patent right lay. The improvement in his last meter consisted in substituting plate metal jointed with leather, for his flexible diaphragm, which he formerly used, but which he had found affected the registration. With a large meter on this new principle, he measured the gas for the monster balloon, at the rate of 8000 cubic feet per hour; and it had been called in to adjust between the South Metropolitan Company and Mr. Gale, when it registered 100 feet per minute. Low's napthalising apparatus was exhibited, to show how readily carburetted hydrogen takes up aqueous or other vapours with which the water meter is charged—thereby lessening the illuminating power of the gas. It consists of a chamber through which the gas must pass, in which is placed a sponge saturated with naptha; a star of gas, treated in this way, was burnt by the side of one as it leaves the main, and the increase in brilliancy was extraordinary. (Applause.) Mr. Defries next drew attention to the superiority of the gas in Scotland, and its very general adoption. There was scarcely a candle-maker left; it was burnt in bed-rooms, parlours, kitchens, and, in fact, wherever artificial light was required. He was sorry the inhabitants of the metropolis did not so well appre-

ciate it, as it was the most economical and safe light which could possibly be produced; and, with respect to the quality, nearly every one of the London establishments was in a condition to turn out gas equally good, if proper attention was paid. It was then shown that the meter would work with ½-10th of an inch pressure, and the index would register the 60th part of 1-10th of a cubic foot. In conclusion, Mr. Defries said, that he had already supplied 16,000 meters; and firmly believed that he had made his dry gas-meter as completely perfect as human head could devise, or human hands perform.—A discussion here ensued, in which Mr. Newton joined; but it ended in that gentleman acknowledging the lecturer's improved meter to be a very perfect and beautiful machine.—A vote of thanks, moved to Mr. Defries, was unanimously carried, and suitably replied to; when the meeting terminated, after bestowing upon the lecturer their hearty applause.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY.....Wheal Barbara Mining Company—British Mining Offices, at Twelve.
Deptford, Rotherhithe, and Bermondsey Gas Company—London Tavern, Twelve for One.
MONDAY.....Bank of Australasia—offices, at One.
TUESDAY.....Kirkcudbrightshire Mining Company—offices
Gas-Light and Coke Company—offices, at Eleven.
WEDNESDAY...Russell Consols Mining Company—Tavistock.
Neptune Marine Insurance Company—offices, at Twelve.
National Reversionary Investment Company—offices, at Two.
THURSDAY.....Imperial Brazilian Mining Association—London Tavern, at Two.
Colombian Mining Association—offices, at Two.
Real del Monte Mining Company—offices, at Two.
FRIDAY.....Cey'on Railway—London Tavern, at One.
Stray Park Mining Company—on the mine, at Twelve.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

BANK OF BRITISH NORTH AMERICA.

The annual meeting of this company was held at the establishment, St. Helen's-place, Bishopsgate, on Tuesday, the 8th inst.

OLIVER FARRER, Esq., in the chair.

The CHAIRMAN said, they had met together for two purposes—first, the election of three directors, who retired by rotation; and, secondly, to submit a report of the proceedings of the bank, up to the 31st of December last. He believed it was the usual course to take the report first, and proceed to the election afterwards. If it was their pleasure, he would pursue the same course now. He would not at all anticipate the contents of the report, but he must say it was very short, and he hoped they would find it satisfactory.

The SECRETARY (De Bosco Attwood, Esq.) read the report, as follows:—

REPORT.

The directors have much pleasure in reporting the steady progress in the business of the bank throughout the year 1846.

There has been a considerable extension of commerce and agriculture in Canada, and the state of trade generally has been very satisfactory. Considering, however, the high prices obtained for agricultural produce in this country, owing to the deficiency of the crops, and the probability that, with a favourable harvest, some reaction may take place, the directors have been led to recommend to their managers such measures of precaution as are calculated, in their opinion, to protect both the bank itself and its customers from the effects of such a change. The severe pressure now felt on the money market at home, renders these precautions the more requisite, and the directors rely with confidence on the vigilance and discretion of the local directors and officers in carrying out their instructions.

The directors now proceed to lay before the proprietors the following statement of the results of last year's business.

The amount of undivided net profits to the 31st Dec., 1845, was	£36,733	10	1
The net profit for the year 1846, after deduction of all current charges and providing for all bad and doubtful debts, was	74,723	18	5
	£111,457	8	6
From which is to be taken the amount of dividends paid, at Midsummer, 1846, 25,000*l.*; at Christmas, 1846, 25,000*l.*	50,000	0	0
Leaving undivided amount of net profit to the 31st Dec., 1846 ..	£61,457	8	6

Upon a careful review of the bank's affairs, and with this favourable state of accounts, the directors feel themselves justified in announcing their intention of paying, on the 5th of July next, a half-year's dividend, at the increased rate of 6 per cent. per annum.

The directors would certainly not have made this increase to the dividend, unless the condition of the bank appeared to warrant a reasonable expectation of its continuance; but they have ever felt that it was their most important duty to protect the capital of the bank; and if, on a future occasion, the state of the accounts should appear to require it, they will not hesitate to meet such a contingency by a lower rate of dividend.

The CHAIRMAN said, that was the short report they had the pleasure of laying before the meeting, and he hoped it would be to them all satisfactory. (Hear, hear.) They, the directors, considered the progress of the bank as satisfactory, and they were happy to say, that the prospects of the future continued as at present, without any diminution in appearance of profit, but rather on the contrary. Now, as to the dividend, it was his opinion, in which all his colleagues agreed, that they were perfectly justified in going to that extent; neither could any colonial bank hold that respectable station it ought to do, unless it could afford to pay its proprietors 6 per cent. for their money. (Hear, hear.) The directors had every reasonable ground for expecting to continue this, and if they had the same circumstances before them on which to found their judgment, they (the proprietors) would, he had no doubt, come to the same conclusion. (Hear, hear.) He could state to them very shortly the progress the bank had made during the last three or four years, by which they could judge if these reasonable expectations were likely to continue. He would first take the position of the bank for the year 1843. On the 31st Dec., 1843, he found the net profit for that year to be 42,937*l.*, at which time the rest, or undivided profit, was 20,529*l.*; in the year 1844 the profit was 49,910*l.*, the rest being then 30,439*l.*; for that of 1845 the profit was 56,293*l.*, the rest for the same year was 36,733*l.* There was a progressive increase in this way till the year 1846, when the profits, as they had just heard, amounted to 74,723*l.*, whilst the rest had accumulated to 61,457*l.* (Applause.) He had the satisfaction to say, that up to this time every branch of their business was increasing in a similar proportion. They also had heard in this report, that if any unforeseen event should happen, the directors would not hesitate to decrease the dividend. This had been done on a former occasion, and they now found that the course they then took of suspending the dividend was a judicious one; for, without it they would have been for years before they could have stood in such a proud position as they did at present. (Hear, hear.) They had only now to proceed with care and caution in the management of the bank, which, as well as their zealous attention, should, he assured them, be devoted to the interest of the proprietors. (Applause.)

Mr. WEBSTER said, he would ask a question. The chairman had said a great deal about their capital, but he had not shown them where it was. Even the Bank of England gave an account of its capital. He must say that the prospects held out were very satisfactory; but he thought they would appear more satisfactory if the proprietors were informed where the capital really was at the present time.

The CHAIRMAN replied, that the answer he should give to that was simply this—that the accounts laid before them were in the same precise form as they were ever since the bank was established. If the form of these accounts should in any way be unsatisfactory, he could only say, that they could be altered, if it was the wish of the general body of proprietors. (Hear, hear.)

Mr. N. LEWIS said, that was no answer to the gentleman's question.

Mr. WEBSTER said, without such a statement the world might say their capital was all moonshine. (Hear, hear.)

The CHAIRMAN observed, that the board had no wish to reserve anything from the proprietors; but to make up the account in another form was not to be done in a moment.

Mr. WEBSTER asked, if it would be done in future?

The CHAIRMAN said, that would depend on the wish of the shareholders.

Mr. N. LEWIS was desirous of knowing, to whom the money was lent—and at what rate of interest?

The CHAIRMAN replied, that they employed their spare capital in the way all other banks employed it—in loans on good security. But to give the names of individuals they lent their money to—many of whom were of the highest respectability—would be, in his opinion, very imprudent. (Hear.) He could assure the hon. proprietor that they were receiving the full market interest of the day. (Hear, hear.)

A PROPRIETOR said, he saw the income-tax was deducted from their dividend. The Bank of England, as well as many other banks, did not deduct the income-tax.

A PROPRIETOR thought they cut it very fine in taking that off. (Laughter.) Would it not be better to imitate the Bank of England, by paying the shareholders the full amount of the dividend?

Mr. CARTER stated, that the income-tax did not apply to the colonies, and that at present no deduction was made from the dividends of colonial shareholders. If, therefore, the income-tax on the dividend of British shareholders was paid by the bank, a corresponding addition must be made to the dividend of the colonial shareholders.

The PROPRIETOR considered that was a satisfactory answer.

Mr. GILLESPIE (a director) said, some companies did, and others did not, deduct the income tax—it was a matter of expediency. This company did not find it advisable to give the full amount. He agreed with the chairman, that they were justified in giving this dividend of 6 per cent.; he was sorry they could not go beyond it, but he hoped they should keep up to it, or do something more. Considering the extent of their business, however, he thought it desirable to add something to their rest, it would be keeping on the safe side. (Hear, hear.)—Mr. G. R. ROBINSON (a director) was of a similar opinion.

The report was then adopted unanimously.

Mr. N. LEWIS said, he saw from the circular, that three of the directors went out by rotation, and were re-eligible. Now, was it not better, instead of having them cut and dried for this meeting, to leave it to the court of proprietors to select three gentlemen, in place of those going out by rotation. It now seemed as if there was no power, or discretion, left to the proprietors.

A PROPRIETOR said, the shareholders had the power.

Mr. N. LEWIS denied it. They never called upon them to select three gentlemen, but they were all elected by the directors. (No, no.)

The CHAIRMAN said, they only asked them to concur in the election of those gentlemen. The court of proprietors might reject them, if they thought proper.

Mr. N. LEWIS replied, that he should not reject them, because he knew they were very fit and respectable, but the subject, he thought, ought to emanate from the body of proprietors.

Several proprietors remarked, that it was so in reality.

The CHAIRMAN observed, that they acted in the same way as other companies, and gave the proprietors an opportunity of proposing any one else, although not obliged by the Deed of Settlement. They had given 40 days' previous notice of those who were proposed for election—therefore, there was plenty of time for the hon. proprietor, if he wished to propose himself—(laughter)—or any one else, for the office of director. Did the gentleman wish them to call a meeting for the election?—if so, this was the meeting for the election. There being no others proposed, they could not elect any one else at this meeting, but they might reject those now brought forward, if they thought proper.

W. R. Chapman, Esq., J. S. Cummins, Esq., and Sir A. P. Green, were then re-elected directors unanimously.

Mr. H. ALEXANDER then proposed a vote of thanks to the directors for their able management of the company's affairs.

Mr. LEWIS seconded the motion, which was passed unanimously.

EXTENSION OF THE PRINCIPLES OF LIFE ASSURANCE.

We cannot omit taking somewhat particular notice of the prospectus before us, from the great importance of the subject upon which it treats, headed "The People's Branch of the Tontine Life Assurance Company," established for the purpose of inculcating and adopting habits of prudence, and elevating the condition of the labouring classes: we willingly devote our columns in reviewing a scheme, which has for its object the improvement of the people, and for extending the advantages of life assurance more widely among the provident members of the community; because the necessity of an association by which the industrious classes and domestic servants may be enabled to provide against old age, and the casualties of life, has been long felt and acknowledged; and those who have taken interest in life assurance, and in the effects produced on the upper and middle classes, have had frequent reason to lament that no attempt has been made to bring within the scope and operation the small weekly earnings of the industrious classes, which has for its object the ensuring a sum of money, to enable his widow or surviving relative to defray the expenses of a decent funeral, or to relieve the immediate wants of his family. The great benefit and immediate advantages that would result to society at large from an institution capable of being rendered more generally useful than the ordinary provident and friendly societies, deserves the serious attention of the philanthropist, and claims the efforts of every one anxious for the welfare of his fellowmen, to do all in his power to promote among them a disposition to provide for themselves and families, through the medium of life assurance, as the only effectual protection for their wives and children against poverty and distress, and the only secure basis for their own permanent prosperity. Until recently no one imagined that life assurance could practically be applied to the class in question at all; a more advanced study, however, of the subject has suggested the means, and the result is, that this great desideratum is likely to be accomplished by the plan of the Tontine Life Assurance Company. We are convinced that an institution of the nature of the one to which we now direct the attention of the working classes, has long been required; and, from a careful consideration of the principles, tables, and constitution generally, we are persuaded that it is designed to fulfil, in a most complete and secure manner, all the purposes for which the board of directors and manager have given their influence and attention. We do not know of any mode of assurance so calculated to disseminate the salutary provision of prudence and forethought in the working man, and place his interests contemporary with his employers, as the scheme before us, in order to give every possible encouragement to life assurance, to those persons who avail themselves of the toil of labour, this society has extended its operations, and formed a separate establishment, called the "people's branch," designed to afford to the labouring population, at a few pence per week, the means to secure a provision for themselves and families, hitherto confined to a class who are able to pay premiums on policies of large amount, while the frugal mechanic and labourer have been denied similar benefits. We are glad to perceive, however, that the plan of this company will abrogate this cruel system of exclusiveness, and the door of life assurance is now open as well to the labourer and artizan as it is to their wealthier employers, and its advantages brought within the reach of the operative, and an opportunity afforded to cherish the feeling of independence in making provision for his family, consequent on his death—a duty that no husband or father can neglect, without risking consequences—serious, indeed, to his wife and children should he be overtaken by death before he should have provided means to assist his family—thereby avert the recurrence of distress, and the humiliation to seek parochial aid incurred in every parish for the burial and support of persons who have deferred to provide against such a calamity. Life assurance will impoverish no man, but will save from indigence millions of families, and place them in a state of security, and in its prodigious developments afford in its application the attainment of an object the most beneficent and exalted that can be contemplated; and experience demonstrates that life assurance is the most precious of earthly gifts, and is one of the happiest discoveries of man—it removes the greatest source of wretchedness and crime, and substitutes for idleness industry, for extravagance economy, for intemperance sobriety, for want competence—it disarms the chamber of death of some of its most painful anticipations, the desolation of an orphan family, the loneliness of a disconsolate widow—it mitigates the sorrows of a bed of sickness, in the knowledge that those who depend on labour are provided for; and even the consciousness that provision has been made against the contingency of death, offers by itself one of the best securities to the working man, to provide for those helpless beings who are the objects of his daily solicitude. We can then only ascribe the apathy which, unfortunately, has hitherto restrained the wider extension of life assurance to the circumstance, that the industrious population are imperfectly acquainted with the theory of insurance, with its kindred science of annuities, as an equitable investment for their savings, whose time and industry are their capital, and cannot, therefore, give attention to the soundness of the principle safely and effectually for themselves. But, when the prudent and industrious are aware of the existence of an association, which, by a trifling subscription, of about 2*s.* a month, commenced at the age of 25, would secure to his relatives or nominees the sum of 50*l.* at his death, whenever that may happen; as, also, a man by the saving of 3*s.* 8*d.* per month regularly made, will give them at sixty, 8*s.* a week for life, that it is dependent upon no more improbable contingency than that a man should live to the age of 85 (one very possible), to give him an annuity of that amount for 30, or even 30, years—while the Savings' Banks, an institution of doubtful utility, being merely a place of deposit, which cannot be termed an investment, since the money which many depositors hold in that institution, and which bring them annually but a trifling income, would secure a provision for the decline of life, they will easily understand this principle of economy, so far as to insure for the contingency of death, or purchase a deferred annuity. Let it be borne in mind that no man is too poor to insure his life, persons of the most limited means can surely lay by the sum of 2*5s.* a year, or about 6*d.* a week, commencing at the age of 25, to provide 50*l.* at death. This sum may be obtained at the trifling sacrifice of a small temporary gratification, easy to forego for a sixfold relief hereafter, which would at once allay his fears of the future poverty of his family, to realise for himself in the hour of his death peace of mind, in the knowledge by that trifling subscription he has secured to his offspring the advantages of prudence and forethought. When the labouring population fully understand their own welfare perfectly, this scheme is capable of producing a very extensive public benefit, as it affords to every industrious and prudent labourer an opportunity, by a comparatively small investment, to secure an annuity for his declining years, or a provision at death; the plan proposed by the Tontine Life Assurance Company only requires the co-operation of the industrious themselves to become of inestimable advantage to the community. The great interest which attaches to the recent operations of this company, and which has led us to the consideration of their plans, is the formation of a branch to embrace the growing wants of an important section of the community—viz.: the *miner*, numerically a large body of the working classes, but who virtually have been shut out from all advantages which life assurance confers, and there is no class of men who require more the protecting influence afforded by life assurance; and, until the establishment of this association, no attempt had ever been made to assure the lives of that deserving body of men termed miners, from the erroneous supposition that this class were unhealthy; but it may occasion some surprise in the mind of inquirers, to learn that so highly important and industrious class of men as miners should stand so high in the scale of mortality, above the employments of plumbers, glaziers, bakers, and clerks. The expectations of life of the miner from 20 to 60 is 85 per cent. of the general average, and the equation of life is at age 61·2—this is a striking exemplification of the principle of life contingency, which recently has undergone important changes and improvement, to ascertain the precise value of the lives of this class of men. We have had a long and early care in the prosperity of the miner, and it is pleasing to reflect that our labours cannot altogether prove fruitless, as that by the trifling portion of his hard earnings, can at least secure some provision against the uncertainty which attaches to every contingency on which labour depends, and the directors, in establishing this institution, have paid every care and attention to adapt it to the wants and circumstances of the community in general—interests so gigantic and so beneficial, so wide in its operations and so important in its effects, deservedly claims the support of the industrious classes. We briefly observe that the business appears to be reduced to its most simple form, and embraces every species of transaction subject to the contingency of human life. The tables have been constructed by that experienced and well-known actuary, Charles Ansell, Esq., F.R.S., author of the *Treatise on Friendly Societies*, and the rates as low and favourable as are consistent with its safety and obligations. We shall return to the subject, to compare the scheme of deferred annuities with Savings' Banks and other contingencies, as effecting the working classes, in order that they shall have a knowledge of the principles and advantages of life assurance.

CHEAP TRAINS—EXAMPLE FOR RAILWAY DIRECTORS.—The Norfolk Railway Company have commenced running cheap trains twice a day, and three days in the week, besides Sundays, from their station at the Foundry-bridge, and from Whitlingham and Thorpe, the places where the Norwich public resort for pleasure at this season of the year, at the small charge of *one penny for the journey*. The distance by the road is about three miles.

PATENT RAILWAY BREAK.—Mr. Lee has exhibited a model of his new railway break, the importance of such an invention is every day becoming more evident, and Mr. Lee's plan seems well calculated to secure the desired object—that of speedily arresting the course of a train in cases of danger. It provides for two classes of danger: for unexpected concussion, a buffer projects from the carriage or engine, and any force coming in contact with it lets down a drag or break upon the rail, which immediately stops the carriage. Although, perhaps, this contrivance would not at once stop the whole train, and with a buffer to each carriage that might almost be accomplished, it would prevent the occurrence of what is most to be feared in cases of concussion—that is, the dreadful effects caused by the meeting of two opposite, the progressive and the arresting forces, by which the carriages in the centre of a train are frequently heaved up or completely crushed. In the other case, that of foreseen danger, the conductor of the train can, by turning a handle, almost immediately arrest its course. It was stated by the inventor, that on the Croydon Railway a train of 19 carriages, descending an incline at a velocity of 35 miles an hour, was, by breaks to one carriage only, brought to a dead stand within 55 yards. Breaks to one carriage in nine are considered to be the requisite average.

MIRACULOUS RESTORATION OF HEALTH BY HOLLOWAY'S PILLS.—Miss Ellen Knight, 36, Stanhope-street, Regent's-park, a young lady of the most delicate constitution, had been a martyr to suffering for years, through overflow of bile and bad digestion, causing palpitation of the heart, with great difficulty of breathing—to walk the least ascent was impossible. The best medical advice had been obtained in London, Birmingham, France, and other places, but in vain; nor did she receive permanent relief until she took a course of Holloway's inestimable pills; and she is now by their use enjoying the blessings of health, that for the previous 18 years she had been a stranger to. Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

IMPROVEMENT IN THE MANUFACTURE OF RAILWAY RAILS.

THORNEYCROFT'S PATENT ANTI-LAMINATING RAIL.

Among the difficulties which railway engineers have had to contend with, there has, perhaps, been none which has caused them greater anxiety than the lamination of the iron, of which the rails are formed, from their being piled and faggotted together, causing them to splinter off on the face, on the passing of heavy trains, rendering them dangerous and useless in a short period after being laid down, and entailing continual and heavy expenses. It has long been a subject of deep thought and serious consideration, how this lamination and splintering could be remedied; for, as the traffic and the weight of the locomotive engine increases, the evil becomes still more serious, and alarming accidents have taken place from this cause.

Mr. THORNEYCROFT, of Wolverhampton, the eminent ironmaster, among many others, having been consulted on the subject, applied himself earnestly to its consideration and accomplishment; and, we are happy to say, has succeeded beyond his most sanguine expectations. Samples of the rails have been inspected by many of the most eminent railway and other engineers in the kingdom, all of whom have expressed their decided opinion of the complete success of the new manufacture. One of them, a man of great eminence in his profession, having been to the works, and inspected the improved mode of manufacture, pronounced it most simple and perfect, and the greatest improvement that has been made in the make of iron rails since railways have been known; and, to use his own words, "it must prove a great national benefit, and I hope the inventor will be amply rewarded for his trouble and enterprise." In the expression of this sentiment we most heartily concur.

We last week announced, in our List of Patents, this invention; and we have since had an opportunity of closely inspecting parts of four rails, which had been broken to show the fracture of the iron at one end, while the other was polished, and an acid applied, showing all the laminæ, and every seam formed by the faggotting of the iron. The following diagrams will clearly show Mr. THORNEYCROFT's improvements:—

Fig. 1.

Fig. 2.

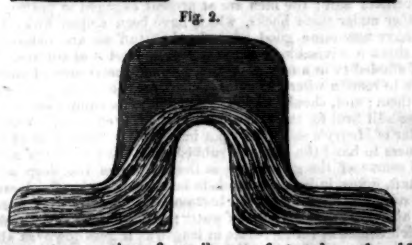
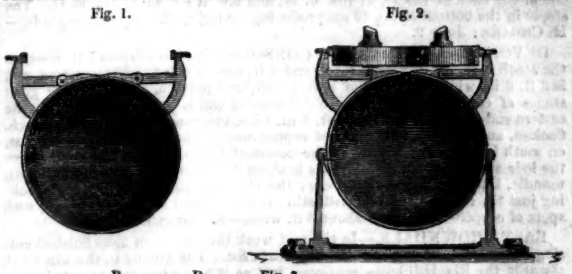


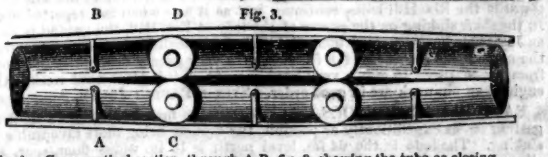
Fig. 1 represents a section of a rail manufactured on the old method, showing the lamination of the iron from top to bottom. Fig. 2 shows Mr. THORNEYCROFT's improvement, by which it will be seen that the part of the iron liable to wear away is *one perfect homogeneous body*, as much so as if it was cast-iron or cast-steel, still perfectly malleable as any other wrought or rolled iron, but, being jointless, is perfectly free from laminæ, and not liable to splinter off on the edges. We understand the rails are about to be laid down immediately at some of the principal stations on the larger lines, where the most severe trials will be given them. The inventor appears to be quite confident that the results will prove highly satisfactory; and, indeed, in this there seems little difference of opinion among all who have inspected them—a few months, however, will decide, and, in the meantime, specimens may be inspected at our office.

CLARKE & VARLEY'S RESILIENT ATMOSPHERIC RAILWAY.

Fig. 1. Fig. 2.



B D Fig. 3.



A C

Fig. 1.—Cross vertical section, through A B, fig. 3, showing the tube as closing.
Fig. 2.—Cross vertical section, through C D, fig. 3, showing the tube as opening.
Fig. 3.—Plan of the tube, showing the position of the rollers in opening the same. The coulter, connecting the piston with the leading carriage, passes up between the two pair of wheels.

We are happy to find that this beautifully simple adaptation of the pressure of the atmosphere to railway propulsion is causing that excitement and inquiry among engineers and the railway world which will, doubtless, eventually convince the most sceptical, and cause the principle to be adopted. From the uncertainty which has for years been hanging over the system generally of pneumatic power as applied to railways, and more particularly the cloud which, during the past few weeks has enveloped it, from its abandonment on the Croydon line, many persons have expressed to us their fears, and indeed conviction, that it was an unfortunate moment to introduce the resilient plan. Convinced, however, from the first, of the soundness of the theory, that the transfer of power by means of the vacuum was economical and safe, and that it only wanted a mode of construction as simple as the principle is good, to prove the same in practice, we feel satisfied that the moment is most favourable; and that the resilient tube, possessing all the advantages which the theory above-mentioned holds out, with none of the defects of the thousand and one futile plans which have in the last few years been brought before the public, will now prove its excellence so effectually as not only to revive the confidence of the desponding advocates of atmospheric traction, but gain a host of converts to the cause. One great objection to the principle of pneumatic propulsion has been the continual breakage to the air-pumps, which has occurred from the absolute necessity of working them at high velocities, to overcome the leakage. The resilient plan avoids this inconvenience, as, from the perfection of the joints, the air-tight closing of the longitudinal opening, and the correct fitting of the piston, the air-pumps are worked with the greatest ease and regularity. A model of a 15-in. tube, with one joint, was exhibited at the *conversazione* of Sir John Rennie, at the Institution of Civil Engineers, on Saturday last, and created a great deal of discussion on its merits, and much general curiosity. Additional lengths of 7 ft., 8 ft., and 9 ft., are being now added to the experimental line at the Poplar station of the Blackwall Railway, where everything possible is being done to test its powers and capabilities; and the patentees are anxious that the most searching investigations should be made. On our last visit to the experimental model, we were favoured with a description of the plans to be adopted for stopping at stations, and passing sidings. It appears to us, that the patentees have not only been devoting their attention to the perfection of the tube, but are prepared with every detail of working; the arrangements for the above movements are most ingenious, and give as much command over the power employed for the propulsion of the train, as can be secured by the locomotive engine.

Mining Correspondence.

ENGLISH MINES.

ALBERT ADVENTURE.—The lead lode looks well: we have put some meat to dress the lead for market.—R. KENDALL.

BARRISTOWN.—The 18 fm. level end west is without alteration; the rise in the back of this level, 30 fms. behind the end, we have holed to a cross-cut driven 3 fms. north from 12 fm. level—thus showing the two lodes distinctly at this point, with about 18 ft. of ground between them; the main lode in the rise is worth 18*l.* per fm. The lode in the 12 fm. end is worth about 14*l.* per fm.; in the stopes, under this level, perpendicular to the 18 fm. level, the lode is worth 14*l.* per fm.; the winze, sinking under this level, has slightly improved, the lode larger and more regular. We have nothing further new in any part of the mine to report on. The following is a list of our prices for June month:—Flat-rod shaft, sinking under 28 fm. level, 12*l.* per fm. (9 men); 18 fm. level end west, 4*l.* 10s. per fm. (6 men); winze in bottom of 18 fm. level, 6 fms. behind this end, 4*l.* per fm. (4 men); 12 fm. level end west, 4*l.* 10s. per fm. (6 men); rise in back of 12 fm. level, 4*l.* per fm. (4 men); gaining stope on middle lode west, under 12 fm. level, 2*l.* per fm. (4 men); ditto east, 1*l.* 10s. per fm. (8 men); winze sinking under 18 fm. level, on middle lode, 7*l.* per fm. (6 men); adit end east, 2*l.* per fm. (4 men). Tributers 40 men, prices from 4*l.* 10s. to 6*l.* per ton.—T. ANGOVE; G. WHITE: June 4.

BEDFORD UNITED.—At Wheal Marquis, the lode in the sump winze in the 80 fm. level east, is 3 ft. wide, and worth 30*l.* per fm.; the lode in this level east is 3½ ft. wide, composed of spar, mundic, and ore—saving work. There has been no lode taken down in the 70 fm. level east since last report. In the 58 fm. level east the lode is 18 in. wide, composed of spar, mundic, and spots of ore in places. At Liscombe, the lode in the adit level east is 3 ft. wide, producing good stones of ore; the lode in the rise in this level is 2 ft. wide, composed of spar, mundic, and stones of ore. The lode in the south engine-shaft is now 3 fms. 3 ft. 6 in. under the plat; the lode is 3 ft. wide, producing good stones of ore. In the adit level east the lode is 18 in. wide, composed of gossan and spar, with spots of ore in places.—JAMES PHILLIPS: June 8.

COATLITHE.—We have sunk A shaft 3 ft. in the last week, and had the vein 15 in. wide until a day or two since, when it became compressed very much, which is generally the case near the bottom of the strata on which we have been sinking; A shaft being now as deep as the bottom of the limestone, I intend driving eastward on the course of the vein, which at present has some ore in it, and a very promising appearance. The horse level is clear now into the end, but we shall be forced to take up a stope from the bottom of it, as there was a great deal of level lost when it was first driven.—W. W. PAULL.

CUBERT SILVER-LEAD.—The only alteration we have to notice this week, different from that stated in last report of 28th ult., is the 35 fm. level, bottom ends, east and west, are improved in size and quality, the lode being, on an average, 2 ft. wide, 1 ft. of which is good saving work—these levels at present are very promising. The 25 fathom level, going east, is a kindly looking lode, 20 in. wide, 8 in. of that width good saving work.—R. ROWE: June 4.

DARTMOOR CONSOLS.—We are getting on very satisfactory with clearing Two Brothers' adit; the men are at present engaged in putting in the necessary timber under some backs, which have been stoped away some years since, and have now some good work in the stuff we are removing—consequently, I think it advisable to save the tin, and get it at surface. The arches of rich tin, alluded to in a former report, I think, under present circumstances, will require to remain where they are, as there is a quantity of ground supported by them; and, should we take them away, we cannot secure the ground to make the adit firm for the present without great expense. We have walled up the collar of Henry's shaft, and put in necessary timber, so as to complete it in readiness to hawl the tin and rubbish from Two Brothers' adit; there is a splendid course of tin gone down in the bottom of the deep adit, west of Henry's shaft, 8 fms. in length—the lode here is 3 ft. wide, of rich saving work; they have sunk on this lode, in the bottom of the deep adit, 7 fms., and were obliged to abandon it, on account of water; and we have every reason to suppose this rich course of tin increases in length as it goes down, as all the droppers, fibres, &c., are dipping into it, and must, ultimately, enrich the lode as it gets deeper. It would be advisable to clear the deep adit, and throw flat-rods, so as to sink on this bunch of tin, as well as sink and drive on other parts of the mine, which can be done by the same machinery; after which, I do not scruple to say, that the adventurers will be amply rewarded for their outlay.—T. GREGORY; J. SPARGO (superintendent): June 9.

DEAN PRIOR AND BUCKFASTLEIGH.—In the 30 fm. level the south part of the lode is about 15 in. big, composed of capel and spar. In the 40, we are about to cross-cut north, to prove the north part of the lode—that is, in a day or two, the end men being now engaged putting in timber in the whim-shaft, and securing the level. In the 50 fm. level, the south part of the lode is at present poor, but the horse of killas, between the north and south part of the lode, is getting smaller, which is more favourable for ore. We propose to drive some three or four fathoms more before we cross-cut through the north part of the lode, to ascertain its size and quality, although, from present appearances, I anticipate an improvement in the lode. On Saturday last, I set two pitches, one at the back of the 50, at 10s. in 1*l.*, and one at the 40, at 12s. in 1*l.* The stopes in the bottom of the 40 are producing saving work—a promising lode.—H. CHOAKE: June 9.

DEVON AND COURTENAY CONSOLS.—We have driven 7 ft. west, on the south lode, in the 30 fm. level, and 4 ft. east; the lode in the eastern end, is 3 ft. 6 in. wide, composed of spar, peach, and mundic, and producing good stones of copper ore; the lode in the western end is poorer than it is in the eastern end—the lode is about 2 ft. 6 in. wide, composed of killas, spar, peach, flookan, and mundic, with spots of copper ore; in the deep adit, driving east, on south lode, we are driving on the course of the lode; the cross-course hove the lode about 3 ft. south—the lode is about 2 ft. 6 in. wide, composed of spar, mundic, killas, lead, and copper ore; the shallow adit, on north lode, is looking just the same as last reported, still producing good stones of lead ore, with spots of copper—the lode is about 3 ft. wide.—E. NORTHEY: June 8.

EAST CROWNDALE.—In the past week the sumpmen have finished cutting cistern-plat, casing and dividing shaft, &c. The ground in the adit level, towards the Rix Hill lodes, continues just as it was when last reported upon. In the shaft sinking on the course of the lode at Rix Hill, the ground is hard, and the lode has very much increased in size, a branch having come into it from the north; it is upwards of 3 ft. wide, of a very kindly description. I hope, from appearances, to give a very good account of this place next week. Our engine and pit-work are in good order.—STEPH. PAULL: June 5.

EAST TAMAR CONSOLS.—At Whitson, the men in Hitchins's shaft are getting on as expeditiously as possible, the ground being more favourable for sinking. The lode in the 64 fm. level north is 18 in. wide—fluor, spar, and silver-lead ore; the lode in the 64 south is 2 ft. wide—saving work. The lode in the 60 north is 15 in. wide, producing good stones of silver-lead ore; the lode in the 60 south is 18 in. wide—work of a course quality. The 54 north is still in slidy ground; the lode in the 54 south is 20 in. wide, producing occasionally good stones of silver-lead ore. The lode in the 46, south from Gourd's, is 2 ft. wide—saving work. At Furzehill, the lode in Harrison's shaft is 2 ft. wide—a very promising lode. The lode in the 46 north is 16 in. wide—saving work; the lode in the 46 south is a very kindly lode—work of a good quality. The lode in the 38 north in 15 in. wide—fluor spar and ore; the lode in the 38 south is 20 in. wide, producing good stones of silver-lead ore. At Charlotte's the lode in the 11 fm. level north is 2 ft. wide—good work; the tributers in the back of this level are getting wages at 8s. 4d. in 1*l.* for lead. I am sorry to inform you, the surface water being so scarce on account of the dry weather, we cannot keep the stamps constantly at work.—B. ROBINS: June 8.

GREAT MICHELL.—The engine-shaft is down below the 22 fm. level 12 fms. 4 ft., the lode in which is composed of mundic, fluor spar, and stones of ore. In the western winze the lode is producing stones of grey, black, and yellow ore.—T. RICHARDS: June 8.

GREAT WHEAL MARTHA.—The cross-cut south is now driven 11 fms. 5 ft. 6 in., and the ground more favourable for driving; according to our calculation, if the lode keeps its regular underlay, we have about 3 fms. more to drive to cut the lode, which we expect to do by the end of this month. At Sherrall's, the shaft is now sunk 8 fms.; the lode is about 3 ft. big, composed of peach, capel, spar, and mundic, with water issuing from the lode—we shall be obliged to suspend operations here. I intend putting the men to costean further north in search of a lode (seen in the adjoining sett to the west); it appears to have a south underlay, and passing through this ground.—THOMAS PENALUNA: June 5.

GUNNIS LAKE.—At Chilsworthy, Bailey's engine-shaft is 9 fms. under the 12 fm. level—the lode remains without alteration. In the 12 fm. level west we have got through the cross-course, and are now driving north in pursuit of the lode; this level east is suspended for the present.—W. RICHARDS: June 8.

HAWKMOOR.—The lode in the 15 fm. level, east of Hitchins's shaft, is 3 ft. wide, composed of spar, capel, mundic, and good stones of ore.—P. RICHARDS.

HEIGNSTON DOWN CONSOLS.—The lode in the 20 fm. level, west of north shaft is 3½ ft. wide, composed of spar, peach and tin—good work, a very promising lode; in the 20 fm. level east the lode is 3 ft. wide, producing very good work; the pitches in the back of these levels continue to yield work of a good quality. The cutting down of north shaft for engine-shaft, under the 20 fm. level, is proceeding satisfactorily.—W. RICHARDS: June 8.

HOLMBUSH.—The ground in the diagonal shaft, below the 120 fm. level, is favourable for sinking—having a cross-course passing through the western end of it; the branches in the shaft are composed of spar, mundic, and ore; the lode in the 120 fm. level, west of the great cross-course, is 14 in. wide, composed of spar, mundic, and stones of ore, and is more promising than for some time past; the lode in the 120 fm. level, east of Hitchins's shaft, on the north part, is 15 in. wide, composed of mundic and spots of rich ore. The 110 fm. level, east of Hitchins's shaft, on the south part, is communicated to a winze that has been sunk some years since, which is full of rubbish, or attle, and must be cleared out before we can resume driving the level to the east of it; the lode in the 110 fm. level south is 18 in. wide, composed of flookan, spar, and stones and sprigs of lead scattered through it—a very kindly lode, and ground favourable for driving. In driving the 100 fm. level south, on the lead lode, a short time since, we cut a large stream of water in the bottom, and on the western side of the level, which has since rather increased than otherwise; at the time we cut it, little or nothing was thought of it; but we rather supposed it would drain itself, as we have seen before in many instances; the level being driven further south, which is quite dry, induces us to put two men to open some ground at the place where the water is issuing from, thinking it may possibly lead us to an east and west lode (perhaps, the flap jack lode), agreeably with the general direction of this lode—it is 10 fms. further south; however, we shall take care to open ground enough on each side of the level to prove it; the lode in the rise, above this level, is 2½ ft. wide, composed of spar and stones of lead, worth 6*l.* per fm.—we expect to hole this rise to the 90 fm. level this month; the lode in the 90 fm. level south is 2 ft. wide, composed of spar, prian, and spots of lead. Our small stamps, with four heads, was set to work last Saturday, which answers very satisfactorily indeed; and we hope in two months hence to set the large one in motion, with eight heads, to work. On Thursday next, we shall send samples of parcel of silver-lead ore (computed 10 tons) to the company who purchased the article, to receive their tender for the same.—W. LEAN: June 8.

ILAM.—In the 42 fm. level, west of Robins's shaft, the lode is looking very kindly, with good vughs of copper, with stones of 4 to 5 lbs. weight. We are getting on well with the plat, and hope to finish it by Friday next. The lode in the 67 fm. level east is from 3 to 4 ft. big, with a very kindly appearance in the end. We have broke into a vugh, or shake, which, it gives me great pleasure in informing you, has made an outlet for the water. We have done but little in the 67 fm. level, west of the shaft, as four of the men are employed in cutting the plat. I have never seen the mine looking so promising as at this time.—JAMES SPRAGUE: June 8.

KIRKCUDBRIGHTSHIRE.—I am happy to inform you, that we have an increase of lead in the lode driving west, at the 40 fm. level, should say worth 10*l.* per fm. The lode in the 30 west is large, not without lead, but, on the whole, poor; the rise not so good as it has been during the week, worth now 20*l.* per fm.; the end in this level east, on the caunter, improves a little as the horse of ground reduces. The lode in the end west, in the 20 fm. level, looks well, worth 12*l.* per fm. Sinking an air-shaft east of shaft, to hole to an old pitch in back of the 20 fm. level, we have discovered lead, worth 5*l.* per fm.; rising against said shaft the lode is worth 3*l.* per fm. The stopes continue to look as usual.—June 5.——I beg to state, we have an increase of lead, say 2 in. big in the end driving west in the 30 fm. level; the caunter appears to be separating to the south at this point, and the main lode continues its own direction. The lode in the 40 west is also improving slowly. In the 20 west it is surprising to say there are no symptoms of the junction, although we are gone beyond the point; from the observations and distances we have taken, coupled with the absence of any nature of the caunter in this end, I am led to suppose the junction is either before us west, or, having formed a parallel with the main lode—at all events, we cannot err, by forcing this end, as the lode is yielding ore, worth 12*l.* to 15*l.* per fm. Regarding the stopes, and all other points of operations, I can only add, that these are looking much the same as last reported.—J. BUZZO: June 8.

LEWIS.—The lode in the 60 east is 2½ ft. wide, worth 3*l.* per fm. for tin; the level in the 60 west is 3 ft. wide, composed of spar, mundic, peach, and white iron, with a small portion of tin; this end has a very promising appearance. The lode in the 50 end east is 4 ft. wide, worth 16*l.* per fm. for tin, and very promising; the lode in the 50 east, on south branch, is 15 in. wide, worth 9*l.* per fm. for tin. The lode in the 40 east is 2½ ft. wide, worth 5*l.* per fm. for tin. Our tribute pitches at the back of the 40 and 50 are looking very well. All other places are much the same as for some time past. We have purchased an axle for the steam-stamps, that will lift 9 heads, and hope to get it in good course of working against Saturday next, the 12th inst., after which we hope our sales of tin will be larger than heretofore.—SAMUEL S. NOEL: June 5.

MENDIP HILLS.—The lode in the winze, sinking below the 38 fm. level, is in a more settled state than it has been since we commenced sinking in this part, it being about 4 ft. 6 in. wide, composed principally of light-coloured flookan, intermixed with stones of lead, the walls of which are very regular in this course, underlaying 2 ft. per fm., ground favourable for sinking; in the 38 fathom level, south of shaft, the lode is 5 feet wide, composed of quartz and flookan, with particles of lead at times—the ground is a little harder than it has been; present price for driving, 55s. per fm. Our different operations in the slag department during the past week have been very favourable, the large bed of slag from which the top rubbish is being removed, continues to hold out very well. We still press forward with all possible speed with the water-course; 250 fms. of launders are laid in their places, and everything is being done to facilitate our progress in getting the remaining part around the hills without delay.—F. C. HARPUR: June 7.

PHŒNIX MINES (near Liskeard).—The 40 fathom level is extended east and west 8 fms., through a lode 3 fms. wide, composed of spar, peach, hard tin, capel, with a little mundic. The 50 fm. level is extended east and west of engine-shaft 105 fms., 85 fms. east, and 20 fms. west; the north part of the lode is fine gossan and prian, with occasional stones of rich copper ore; the south part is from 2 to 3 fms. wide—spar, peach, and tin capel. The 60 fm. level is extended 50 fms. east of the shaft, sometimes in the country, and sometimes in the north part of the lode; it is from 2 to 3 fms. wide, consisting of gossan, prian, a little mundic, and good stones of copper ore. The 70 fm. level is extended east and west of the shaft 54 fms.; the lode is from 2 to 3 fms. wide—hard spar, peach, mundic, and tin capel. It will be necessary to erect an 18-inch cylinder, steam-whim to haul up the stuff, and a new 50 ft. wheel stamp, in addition to the present stamps. The lodes to the north of the shaft have only been seen in costeaning pits, which were filled up; but, from all that I could learn from the agents, they are worthy of a cross-cut at a deeper level to prove them.—W. LEAN.

SOUTH TAMAR UNITED.—Our engine is working very satisfactorily, and has forked the water 7 fms. under the 24 fm. level. The shaftmen are engaged in putting in dividings, casings, and footway, making good all necessary work as the water goes down. The men in the adit level are getting on in clearing and securing very satisfactorily.—B. ROBINS: June 8.

SOUTH WHEAL MARIA.—The cross-cut north from the shaft is driven about 7 fms. The men cut a pretty large stream of water last night, from which we are led to suppose that we are very near a lode. The ground is not quite so favourable for driving as when last reported. The ground in the south cross-cut continues much the same; here we are about 5 fms. from the shaft. There is no appearance of a lode yet, although the ground is yielding pretty much water.—GEO. FRANCIS: June 10.

SOUTH WHEAL TRELAWNEY.—The cross-cut, west of Snell's shaft, is still driven with six men—ground just the same as last mentioned. Snell's engine-shaft is in course of sinking undit the adit with nine men—ground just the same as last reported, composed of white killas, mixed with mundic and spots of copper ore, and water favourable.—W. JENKIN: June 7.

TAMAR SILVER-LEAD.—In the 160 ends no lode has been broken since the last report. In the 145, north of the shaft, the lode is 18 in. wide, and good saving work, leaving ground in the back and bottom which will work at a moderate tribute; in the same level south, the lode is disordered by cross branches. In the 135 end the lode is 2½ ft. wide, saving work. In the 125 fm. level the lode is 2 ft. wide, composed of flookan and ore, good saving work. At the north mine, the ground in the 70 end is a little improved for driving within the past week; the lode is still in a disordered state, being so near the hard hill. In the 60 end east the lode is 3 ft. wide, composed of capel and ore—a very promising lode; the pitches we have working here are turning out remarkably well. We sampled, on the 1st inst., computed 102 tons of rich silver-lead ores.—J. SPRAGUE: June 7.

TINCROFT.—There has no material alteration taken place in the state and prospects of these mines since my last report. I regret, however, to say, that in consequence of disturbances among the miners in the neighbourhood, very little has been done in the past week; now, I am glad to say, all is peace.—W. PAUL: June 7.

TRELEIGH CONSOLS.—In the 110 fm. level, east of Christoe's, the lode is about 2 ft. wide, producing stones of ore, and much harder than it was. In the rise above the 100 east, the lode is 20 in. wide, and will produce about one ton of ore per fm., worth 5*l.* per ton. In the winze below the 90 east, the lode is 18 in. wide, worth 3*l.* per fm.—this will be holed next week to the rise. In Garden's shaft, below the 90, the ground is very hard—we have 4 ft. more to sink it to the 100 fm. level; in the 90, west of Garden's, the lode is 20 in. wide, producing good stones of ore, and more promising. In the 80, west of ditto, the lode is 3 ft. wide, worth about 12*l.* per fm., and has a more promising appearance; in the 80, east of ditto, the lode is 2½ ft. wide, worth 40*l.* per fm.; the south branch, which split off, has fallen in with the lode. In the winze, below the 70, east of ditto, the lode is 20 in. wide, worth about 5*l.* per fm.; in the 70, west of Symons's, the lode is 4 ft. wide—capel, with occasional stones of ore. In the 60, west of ditto, the lode is 2 ft. wide, worth about 6*l.* per fm. In the winze below the 50, west of Symons's, the lode is 20 in. wide, worth 5*l.* per fm.—this will be holed on the 60 next week; in the adit east, on Wheal Parent lode, we have done but very little this week—the men having been employed making ore floors at Garden's.—W. SYMONS: June 5.

UNITED HILLS.—In the 90 fm. level there has been nothing done for the past week, the water being in, in consequence of changing a piece of rod. In the 80 fm. level, eastern end, the lode is 3 ft. wide, worth 16*l.* per fm.; west of cross-cut the lode is 3½ ft. wide, worth 12*l.* per fm. In the 70 fm. level the lode is 2½ ft. wide, worth 5*l.* per fm. The 60 fm. level is suspended since Aug. last; in the shallow adit the lode is 2½ ft. wide, worth 4*l.* per fm. At Wheal Charles, in the 40 fm. level, the lode is 2½ ft. wide, poor. At Wheal Sparrow, in the 40 fm. level, the lode is 2 ft. wide, worth 4*l.* per fm. In the 30 fm. level, western end, the lode is 6 ft. wide, worth 15*l.* per fm.; the lode in the winze is 6 ft. wide, worth 10*l.* per fm. In the 20 fm. level no lode broken for the past week. In consequence of our stopping the engine at Williams's last Friday, to change a piece of connection rod, the water rose to the back of the 70 fm. level—at present it is to the back of the 80 fm. level. We hope to be in fork by Thursday evening, or Friday morning.—T. TREVENEN; R. WILLIAMS: June 8.

WEST SHEPHERDS.—Our mine still continues to exhibit a very promising aspect. We have a good leader of lead in our bottom end, average about 2 in. wide; the pitch in the back of the level is also, on the whole, pretty good; the men have at present 4*l.* 4s. per ton for raising lead ores. As the mine goes westward in the extension of its bottom level, the country around the lode is becoming more favourable, and the lode more promising. The mine never exhibited more promising indications for mineral than at present. Sold lead ores June 2, 17 tons 5 cwts. 2 qrs., at 10*l.* 6s. 6d per ton = 176*l.* 4s. 7d.—T. HOOPER.

WEST WHEAL JEWEL.—In the 115 fm. level east, on Wheal Jewel lode, the lode is 18 in. wide; the further we extend this level the more promising it is looking for ore—driven last month, 2 fms. 1 ft. In the 100 fm. level west, on Wheal Jewel lode, the lode is 1 ft. wide, worth 4*l.* per fm.—driven last month, 1 fm. 5 ft. 6 in.; in the winze, in the bottom of the 100 fm. level, east of cross-cut, on the same lode, the lode is 2 ft. wide, composed of spar and mundic, with good stones of ore—sunk last month, 2 fms. 1 ft. The winze in the bottom of the 85 fm. level, west of cross-cut, on the same lode, is looking much better than it has at any former period—sunk last month, 2 fms. 6 in. In the 70, west of Williams's cross-course, on same lode, the lode is disordered by a small cross-course, at present unproductive—driven last month, 2 fms. 5 ft. In the 30, west of Quarry shaft, on Toicarne's tin lode, the lode is 2 ft. wide, worth 9*l.* per fm.—driven last month, 2 fms. 3 ft. In the 12 fm. level west, on the same lode, the lode is 1 ft. wide, worth 8*l.* per fm.—driven last month, 2 fms. 2 ft. 6 in.; in the stopes, east of Quarry shaft, in the bottom of this level, the lode is 3 ft. wide, worth 27*l.* per fm.—stoped last month, 5 fms.; driven east in the end, 1 fm. 10 in.; in the 12 fm. level, west of the old sump shaft, the lode is 2 ft. wide, worth 12*l.* per fm.—driven last month, 2 fms. 2 ft. 3 in.; ditto east, on the same lode, the lode is worth 6*l.* per fm.—driven last month, 2 fms. 1 ft. 6 in.; in the adit end, west of Quarry shaft, on the same lode, the lode is 1 ft. wide, worth 6*l.* per fm.—driven last month, 2 fms. 2 ft. 3 in.; in the stopes, east of Pryor's winze, the lode is 3 ft. wide, worth 25*l.* per fm.—stoped, 5 fms. 3 ft.—R. JOHNS; T. BRAY: June 7.

WEST WHEAL MARIA.—The eastern engine-shaft is down 36 fms. 1 ft. 7 in.; the lode in this shaft is about 5 ft. wide, 18 in. of the north part of which is saving work, and promising further improvement. The western engine shaft is down below the 54 fm. level 5 fms. 4 ft. 6 in.; the lode in this shaft is about 2½ ft. wide, producing a little ore in places; in the 54 fm. level, east of this shaft, the lode is about 2 ft. wide, with spots of ore occasionally; in the cross-cut south, in this level, the ground is a little improved for driving.—THOMAS RODDA: June 8.

WEST WHEAL ROUGH TOR.—We have opened on the course of the large lode in places—for about 160 fms. west from the east boundary, it is not less than 20 ft. wide in any of the openings; and, in the most western pit, the indications are very good—we still continue opening on the line thereof westward.—T. RICHARDS: June 9.

WHEAL ADAMS.—The sumpmen are still engaged in clearing and securing the engine-shaft, and so far the timber work is more perfect than it has hitherto been. We hope to resume driving the 40 south, on the western lode, in the course of next week. We have since our last report commenced sinking a winze in the 40 fm. level, to the north of Tanking's pitch, in addition to the one previously sinking to the south of it—the lode in both of these winzes will produce 1½ ton of lead ore per fm., and will lay open ground, to be worked at a low tribute. The cross-cut, extending west in the 28 fm. level, south of the new engine-shaft, is at present in compact slate, which was also found in the level below, and in other parts of the mine, about 2 fms. from the western silver lode, which lode we expect to intersect in about a week from this time; the cross-cut in the extreme end north is still in favourable ground, some parts traversed by small veins of quartz, containing lead of good quality. The cross-cut in the 18 has reached a mass of porphyry, in which the lode is not likely to be found productive, and we have, consequently, suspended driving it. You will perceive, by the setting report, which accompanies this, that we are not at present working Williams's pitch, in consequence of having set to rise on course of the lode from this to a level driven several years since, where we expect to meet with orey ground. My engagements with Mr. Hacket, who is present, prevents my entering into particulars this week; I will write more fully in my next.—J. PRINCE: June 9.

WHEAL LOUISA.—Our sumpmen are engaged in cutting cistern plat, bearer holes, putting in bearers and cistern, fixing lift, &c., which will be completed by the time this letter comes to hand. Saturday last was our setting day, when we set the engine-shaft to be sunk to the 30 fm. level by six men, at 18*l.* per fm. The ground through which we have been sinking is much the same as in the level above. The lode in the 20 fm. level east is become much larger than when I last wrote you, being full 12 ft. wide, composed of quartz, flookan, prian, and some good stones of copper ore, which indications are highly encouraging. From those appearances, we have resumed driving the western end, and I am much pleased to inform you, that the lode here has greatly improved since the commencement. In taking things altogether, the mine was never looking so well as she is at this time, and I am anxiously pushing the men, in order to see the 30 fm. level as early as possible.—JAMES CHYNOWETH: June 8.

WHEAL EMMA.—The sumpmen are engaged squaring down the shaft, after which we shall sink a fork, in order to fix the pit-work to the 32 fm. level, which will enable us to drive to cut the north and south lodes. The lode that I referred to in my last report, that we had discovered in the bottom of the shaft, is about 2½ ft. wide, composed of capel, mundic, and spar, and may be termed the middle lode.—H. CHOAKE: June 9.

FOREIGN MINES.

IMPERIAL BRAZILIAN MINES.—*Gongo Soco, March* 23.—I have the honour to submit duplicate of my respects of the 19th inst. I am happy to inform you, we are now in actual and entire possession of Bananal; and, as the notary will finish copying the necessary documents to-day, to-morrow we shall take legal possession. I am sure, in a case of such consequence, you will approve of my being scrupulous not to omit one form which may be added to our security.——*April* 3.—I regret to say, that the Gongo Mine has presented nothing calling for observation since my last respects; every means of conveyance we can command is now in active employment removing from this place and from Catta Preta such machinery and stores as are needed at Bananal; several artificers, miners, and labourers, are already there, and we await only preliminary preparations for their employment, and accommodation to send many more; and, by the end of this month, there will remain here only as many as the necessary experimental researches may require.—Gold workings from 13th March to the 2d April, 6 lbs. 9 ozs. 9 dwts.—W. J. HENWOOD.

ST. JOHN DEL REY MINES.—*Morro Velho, March* 29.—*Produce.*—Average number of stamping days with 71 heads, 26·98; average number of heads working 28 days, 68·41. The supply of ore has scarcely improved; the East Cachoeira Mine has been under water since last post.

Mine.—A temporary lift of pumps was completed in the Cachoeira shaft last Thursday, since which the water has been draining well, and to-morrow it is expected the Pengilly's kibble will be enabled again to draw ore, and stoping operations resumed in this part of the mine. I hope now all the temporary difficulties are approaching their termination, for Capt. Treloar and his men were becoming tired out; some ore had to be broken in the West and Middle Cachoeiras to keep up the supply of ore to what it was. The mechanics have been employed in preparing the temporary lift of pumps, they will now commence with the 40 ft. pumping wheel again.

ALTEN MINES.—The following is the estimated produce for April:—

Mines.	No. of men.	Tons ore.	Per ct.	Tons copper.
Raipas	26	65	5	3·25
United Mines	12	50	5	2·50
Eyer's	6	6	5	0·30
Mancur's	8	24	5	0·12
Michell's	6	5	5	0·25
Cole's	6	33	44	0·16
Old Mine	4	12	6	0·72
Quænvig	2	3	4	0·12
Total	70	147		7·42

Mining Report, from the 22d April to 12th May.

Raipas.—My last report will, in some measure, have prepared you for the deterioration in the quality of this month's produce, which is even greater than I had anticipated; it will, however, be observed, by a reference to the April delivery note, that the per centage of the best ore has again increased from 14 to 25 per cent., whilst the dredge and smalls still continue low. A general improvement has evidently taken place in the appearance of the several lodes; but it has been so recent, that I dare not hold out hopes of its permanency before further investigation. Labouchere's lode has latterly been much disordered; but, in approaching a more settled and regular stratum, has again improved, and at present wears a more kindly and promising appearance than for some months past. The 10 fm. level, on this lode, is driving on a fine gossan lode, about 2 ft. broad, and containing some rich patches of purple ore, which appear to improve towards the bottom of the level; it will, therefore, be necessary, in the course of the summer, to commence a cross-cut from the westernmost workings, in the 20 fm. level, for the purpose of exploring this lode at a greater depth. The produce of Carr's lode is still fluctuating, but the improvement alluded to in my last report continues equally promising, and at present is yielding some good returns. The other stopes and workings continue as last reported; about the latter end of this month we hope to make preparations for repairing the damage in shaft No. 2, and expect to be able to resume the stopes in this part of the mine about the middle or latter part of June. The snow and ice are now fast disappearing, and our winter carriage has also ceased for the season. As soon as the general thaw sets in, the ores remaining at Bossikop, and on the mine, in a frozen state, shall be collected, and returned to the smelting-house in this year's deliveries.

United Mines.—The stopes on Ward's old lode still improve, and all the workings continue to yield above the average returns, of a somewhat better quality than before.—Wood fall's tributers are also producing some good ore, of an improved per centage. On the whole, these mines have latterly undergone an important and beneficial change, as well in the quantity as quality of their produce.

Tigger's.—The improvement last alluded to still continues, and the prospects of the new lode (at present the only part of this mine at work) hold out greater hopes of permanent returns than for some time past.

Mancur's.—A communication has now been formed between the old stopes and south winze, which will tend to materially reduce the cost of working this part of the mine. The lode is small and hard, but contains good ore, and holds out the best hopes of an improvement shortly taking place.

Michell's.—The roof stope has been suspended, and the shallow adit easterly is still poor, wet, and expensive, but I still consider it advisable to drive a few fathoms farther for the sake of draining and exploring the eastern part of the mine, which at present remains in its pristine state, with traces of rich ore at the surface. Some of the old workings on the north lode, suspended in 1837, are now resumed on tribute, and we expect the returns from this part will amply repay the cost of driving the adit.

Cole's.—The ore has latterly been confined to the bottom of the stope, but the great quantity of water flowing into the mine during the melting of the snow on the mountain, prevents our following it in depth. In the meantime, however, we have set the ground nearer the surface on tribute, and hope, by this means, to keep good the returns.

Old Mine.—The value of the returns has been enhanced by paying the miners for the produce in proportion to its value; in this manner one parcel of ore has been increased to 7½ per cent., where it formerly seldom produced more than 5. The men are now beginning to see the advantage gained by carefully selecting and preparing the different kinds of ore; and I expect the ensuing summer will enable us to return a greater quantity of ore, of a better per centage than formerly. As soon as the summer sets in, we intend to resume operations on the old halvan heap, at the surface.

Wilson's, and the *Powder-house Mines* (the latter stopped in 1839) have again been resumed by some of our old workmen on tribute. The returns will not at first be great, but we expect the stimulus given the men will lead to profitable and important discoveries.

Ore Dressing.—Our stocks of halvans, smalls, and picking stuff, are now ready to commence these operations as soon as the weather will admit; the machines will also be ready to work as soon as the Witsunday holidays are finished. S. H. THOMAS.

Raipas Mine, May 8.—With this opportunity, I beg to forward you the report of the mine, which I hope will be acceptable. The lode in the 10 fm. level, driving east, still continues much the same as when last reported, with a very kindly appearance in the roof, which is about 2 ft. in size, consisting of gossan and purple ores, and producing about 2½ tons of ore per fm. In Arne Olson and partners' rise, in the 10 fm. workings, the lode is about 3 ft. in size, containing purple ores, and producing 3 tons per fm. In Labouchere's, the lode is about 4 ft. in size, composed of heavy spar and purple ores, and, at the same time, wearing a most brilliant aspect, this place having improved considerably since when last reported; and should it continue so, I have no doubt but what it will tend greatly to enhance the per centage of the ores delivered to the smelting works during the summer, the average produce of which is about 5 tons of ore per fm. In the foot stope in the shallow adit workings, the lode is about 4 ft. in size, composed of limestone and quartz, containing purple and yellow ores, mixed together, and producing about 4 tons of ore per fm.; the ground, however, is hard, and unfavourable for driving. In the roof stopes, in the shallow adit workings, the lode is at present in a very disordered state, though it is still producing some rich purple ores, and returning about 3 tons per fm. In Carr's the lode is also improved considerably within the last two or three days for purple ores, and is at present producing upwards of 5 tons per fm. In the stope, west of Labouchere's, I have as yet been unable to set a bargain, which is chiefly to be attributed to the ore being in a very disordered condition, and which, up to the present, will admit of no other alternative but to work it by the day, until it assumes a more composed aspect. Upon the whole, things are looking favourable; and should they continue so throughout the summer, I am inclined to think we shall be able to make ample amends for the falling off in the produce these last six months, which was solely owing to our being compelled to rise and sink through so much dead ground, the which was absolutely necessary to accomplish as soon as possible, so as to get the mine in a working, as well as a productive, condition.—SAMUEL MONK.

ANGLO-MEXICAN MINES.—*Guanaxuato, April* 23.—The mining operations of the past month are certainly more profitable than they have been of late, and I hope before long to recover all the money we expended in unwatering the pozo of San Casimero, but there is no great hope for much future profit, unless we expend some $20,000 in carrying on one of the main levels; but, as that is now out of the question, I will continue to pick out what I can from the present shell-like state of the mine. I feel reluctant to abandon Asuncion, because I firmly believe it would be a noble mine, with new outlay and fresh acquirement of neighbouring pertenencias and ground; so, for the present, we will go on with such economy as I have always practised to the extent that I could, and which economy, by the way, has secured to us the little profit, which, during past months, we have got out of the mine, until we were interrupted by the breaking in of water into the only good point then occupying our attention. It is my intention very soon to descend the mine again, and see what may suggest itself from personal inspection. In the meanwhile, I now submit the operations of the past month in Asuncion:—

Week ending	Memoria.	Sale.	Profit.	Loss.
Mar. 27	$ 419 5 1	$ 1201 1 0	$ 180 7 5	—
April 3	366 3 6	859 7 0	33 4 0	—
10	473 6 2	926 0 0	—	$10 6 2
17	490 1 0	1783 7 0	401 6 6	—
Total			$ 616 1 11	
Less loss			10 6 2	
Total profit on the four weeks			$ 605 3 9	

Total sale in the four weeks amounted to 740 cargas; average price, $6½ per carga.

BOLANOS MINES.—SAN FRANCISCO DE PAULA MINE.—*March* 12.—There is nothing new to advise in this mine. We look now daily to cut the lode in our 4th cross-cut. The buscones have been raising about 100 to 130 cargas week'y of very good ores, and this without working in the bottoms of No. 3 level, which are full of water.

April 13.—The 4th cross-cut is now advanced 12 varas from the shaft, without having cut any wall of a vein. The workings of the buscones have lately become very poor; and in order to stimulate a greater extraction, by inducing them to work on the narrow veins, I have again raised the partido from one-fourth to one-third, with the understanding, however, that, whenever we may choose to work a labor on mine account, they are to surrender it at once. This will, no doubt, be when the bottoms of No. 3 level are are drained. The east end of the 1st lode, on 3d level, came upon a cross lode with its underlie east—probably, San Francisco lode. An end north has been opened upon it, as it contained a promising vein of ore. This vein has continued, and produces good ore, and has, moreover, cut several other natural veins, showing the extraordinary width of this lode (the 1st lode), and the great number of veins and branches contained in it.

April 16.—Yesterday the 4th cross-cut cut into the wall of a vein, which has let out a heavy feed of water.

April 20.—A few stones, which have fallen from the wall of the vein just cut, assay only 12 ozs. per monton, but not more than a quarter of a vara has been opened into the vein, the men being employed in squaring their end. The winzes of No. 3 level are drained, and will be ready to work upon next week. No more water appears in No. 3 level.

CELESTINA MINE.—*March* 12.—The interesting work reported in my last—a cross-cut to seek the hanging wall of Mayorazgo lode, in the 64 vara level, has been completed, and the thread of ore there found narrow and poor; an end has been opened upon it this week, and I have still hopes that it will improve. The north end of Mayorazgo level, which during the last month had fallen off a good deal, has since last week recovered its character, and the ore is even wider than we have seen it before, and of very rich quality. The north end of Entresuelo has broken into the winzes sunk from the upper level, in the stopes of which good ore is still found, but the workings altogether are much reduced from what they were, and we cannot at present raise 1000 cargas weekly, as before.

April 13.—The north and 64 vara level, on Mayorazgo lode, has advanced about 13 varas without any improvement. A winze from Entresuelo level has communicated with the above level, losing all its ore as it sunk. The south cross-cut of Socabon has been resumed, with a view to leave no doubt about the existence, or non-existence, of the Mayorazgo lode to the south of that of Celestina; no discovery has been made in it. The ore in the ends of Mayorazgo and Entresuelo has also fallen off of late, and the stopes have become exhausted—so that, instead of 30 paradas de busca as formerly, we now have only 15; it may be necessary here, also, to increase the rate of partido,

April 20.—The narrow vein of good ore continues in north 64 vara level, and the two upper ends on the same lode (Mayorazgo) have improved. The discovery of ore in the lower level is very satisfactory; and if it continues to increase, the mine may still become of great value.

EL BOTE MINE.—*April* 20.—The system established of paying the workmen at 5 reals per carga, as I advised you in my last, has now began to work with good effect; so that in the week ending 27th March, the extraction was raised to 3054 cargas, and the extraction has not since fallen off. In the east end of Guadalupe, at the end of last month, a "relix" of quartz crossed the lode from north to south, and from thence the vein got so full of "bolsas," that almost all the ores disappeared. Up to the present, very few ores have been extracted, and very little improvement is to be seen, although it seems that the "bolsas" are getting less every day; and, by the end getting again into compact ground, no doubt an improvement would be immediately seen; this cause has also retarded the driving. The west end of Guadalupe, I am happy to inform you, has gone on improving, and at this present moment there are about 2 varas of very good ores in it.

The sinking of the shaft of San Fernando has gone on very well, considering that the water has augmented; the bottom of the shaft is now passing through numerous small veins of quartz, and every time one of them is cut there is a rush of water. Fearing that if the new cross-cut is delayed, it might be difficult to open at a deeper level, I have determined to do so at 140 varas; and, if there is no is no impediment, this work will be begun from next week, and as soon as it is driven 5 or 6 varas, the sinking of the shaft will be resumed.

Statement for April.—I beg to forward an extract from the account for the first three weeks (first week, profit, $3698 3½; second week, profit, $3790 3½; third week, loss, $4009 6½). The cost and returns for last week show a loss, but this arises from no silver having been sent in from the hacienda of Cinco Senores, although two tortas were washed, it was impossible to burn the silver in time. This week (ending 24th) will, no doubt, show a very handsome profit, as I fully expect 600 montones to be washed.

Statement showing the General Results of the Mines and Haciendas in the Zacatecas District in January, 1847:—

Mines.	Profit.	Loss.
San Clemente Mine	$ 2237 4 4	—
San Nicolas	1749 0 7	—
Malanoche	—	$ 99 4 4
San Rafael	—	7191 2 7
Celestina	5984 6 5	—
Loreto	—	386 5 2
Haciendas	2703 6 3	—
	$ 12,664 2 3	$ 7677 4 5
Deduct loss	7,677 4 5	
Profit	4,986 5 6	
El Bote Mine—profit on Feb. and March	$ 10,203 7 5	

COPIAPO MINES.—*Checo Copper Mine, June* 11.—We have commenced sinking in the large gossan, at the western end of this mine, and have a very pretty vein. It is not only a gossan now, but contains some beautiful spots of rich blue and yellow sulphurets of copper, interspersed through the vein, although we have not sunk more than 3 fms. I do believe that we shall have a rich bunch of ore here in a month or two; this change is the effect of one man's labour in a month. The barretero, sinking the winze to the east of the Victoria shaft, has broken three bends of good ore in the last month; this will pay well for sinking, and leave some stopes to be taken away afterwards—hence, you will perceive, the advantage of exploring operations in this mine. The stopes in the back of the 20 fm. level, to the east of Harman's shaft, have yielded well in the last month, but will be completely finished by the end of May—by which time, I hope to have some new ones at the east, and that will last a few months; and, before these are all taken away, I am in great hopes of having some new and good ones at the west end, referred to above. I am fully persuaded, that a degree of perseverance would soon be stamped on this mine, if more effective exploring operations were applied to it.

San Pedro Copper Mine.—I shall not attempt to conceal from you, that the changes in this mine have caused me great anxiety of late month, arising principally from two circumstances; one of which gave me great [illegible]ishment—while the other has created great hopes and expectations. This I know is an everyday occurrence, and presents no novelty to a miner; but, to us, the smallest change, especially a reverse, is of great importance. When I reflect, that it is on the labour of about 15 barreteros, or pickmen, we have to depend for a supply of ore to sustain this establishment, the cutting out of a rich vein, on which our chief hopes were centred, must appear important, because it changes the aspects altogether—such, then, was the case in this mine last month. We commenced the shaft, or winze, in a beautiful vein of rich ore, with the full expectation of sinking through it 10 fms. at least; but we had not sunk above 10 ft. before we came in contact with a large slide that has heaved the lode, and left nothing but the hard country before us to sink in; but, not being willing to pursue it in hard ground on an uncertainty, I have put the men to drive to cut the lode, just below the slide, in hopes of intersecting it as rich as before it was heaved. If so, we shall resume the shaft; but, if poor, whether or no, we should sink in hard ground with a heavy water charge, deserves serious consideration; however, I hope the result in the cross-cut will be favourable. Notwithstanding this reverse, we have had something of an encouraging character also—for, in driving the 24 fm. level west, we have had an improvement which will add us considerably, should it continue, and lay open new stopes for the future, because it is going into virgin ground—the vein is now 10 in. wide, of rich ore, not less than 37 per cent.; but, for the three extra hands that you allowed me in the last two months, this end could not have been driven—for the vein has become poor; still, by persevering a little, only through 3 fms. of poor ground, it has become rich, as I have described; and how much has been lost by abridging the operations here in the last year, is not easily determined; but I am convinced it has been great. We have now little else but the new ground to depend on for our future produce—the old stopes being nearly finished—and of this you have been constantly advised. The 15 fm. level west has a very promising appearance—yielding some good stones of ore; and I hope we shall soon find the same shoot that we have now in the 24 fm. level.

Pampa Larga Silver Mine.—Since my last we have communicated Carvallo's shaft to the bottom level, and are now squaring it down and cutting a plat, which will occupy the men about 10 or 12 days from this, when we shall commence driving the intermediate levels, and sinking the winzes referred to in my last, from which we expect to increase the produce considerably. The bottom level east, on the arsenical vein, is poor at present; but we hope soon to find another bunch of ore, as we know there is before us a strong shoot, that is visible in the adit level. In driving the bottom end west, we cut the wall of the main vein on the 24th inst., but have not had time as yet to penetrate the lode. I have been somewhat disappointed here, as I expected to have intersected the Cochizo vein before we came in contact with the main one—but this is not the case. It has evidently either died away, or merged away into the main vein, which of the two will be clearly ascertained previous to my addressing you again, when I shall present you with all the information I possibly can on the subject. There is one circumstance that carries with it a good sign, and producing rather a favourable impression on my mind, that it is become incorporated with the main vein—viz., its having a pretty wall—and seems to be a firm and compact vein, and not a soft rubble stone and incompact formation as at 15 fm. level—this may be the effect of the Cochizo vein being blended with it, or it may be from some other cause which a short time will fully develope. The stopes on the Cochizo vein are not looking so well as when last reported on—the ore is more combined with stone, and I entertain doubts whether the vein will extend far, either in length or depth, as a separate and distinct lode, but its good effect may yet be seen; for should it form a junction, and amalgamate with the main vein, it may change its character altogether, and render the whole productive. On the main vein we have nothing new to report on; the two levels now being driven, the 15 and 20 fm., are poor; the vein in each end is large, but not of that pretty composition I would like to see; however, we cannot tell to a foot how soon a change for the better may appear. We have not yet been able to resume the stopes in this vein, but hope to do so in a few days. The Estaca del Rey lode does not look so pretty as it did a month since, it is now mixed with common stone, and entangled with the country without having such beautiful walls, which formerly divided it so distinctly from the surrounding stratum; whether it will again improve in this part or not, time and perseverance alone can determine.

Silver ore raised at Pampa Larga since last reported on	9 tons
Produce at St. Pedro Copper Mine for January	55 ,,
Ditto at Checo ditto ditto	46 ,,
Total	101 tons.

The *Alexander Harvey* with 400 tons of copper ore, and the *Michael Williams* with 310 tons of copper ore, and 4 tons of silver ore, have arrived at Swansea for the company.

PACHUCA MINES.—*April* 28.—But little alteration has taken place in the progress of the works during the month. I was underground through the mines on Friday last; and although I did not observe any decided improvement in the lodes, yet their general character is unaltered, and they are well deserving a further trial, particularly San Guillermo, where there is a great mass of vein, north and south of the shaft, still to be examined, which we purpose doing at the depth of 50 varas, and which will be reached in the course of a week or two more. At San Pedro, the lode is hard, and thinly spotted with ore, and, it would seem, must be followed to a greater depth. The workings in the west end of the shaft, above the 70 vara level, did not produce much ore, containing a ley that would pay for returning, and were, therefore, suspended. The operations will, for the present, be confined to three destajos—viz., San Guillermo and San Pedro shafts, and the 70 vara level, west of the latter. The weekly cost will, therefore, not exceed $140.

REAL DEL MONTE MINES.—*Mineral del Monte, April* 28.—The directors having decided on detaining the engine in England until they receive information of the removal of the blockade, and the existing impediments to its being brought up to the mines, it follows that we may not expect it until the early part of next year. In the meantime we shall do our best to continue the effectual working of the mines, although surrounded with difficulties, as will hereafter appear. The repairs of the boiler for heating the salt solution in M. Spangenberg's process have been delayed longer than expected, in consequence of the artizans being engaged about other work. It is now completed, and the process again in operation, and Mr. Piotrouski speaks rather favourably of it.

Mines.—The San Guillermo winze below the Aviadero on the Santa Brigida vein reached the level of the water at 17½ varas below; the sinking has, therefore, been temporarily interrupted, and the barreteros are now employed stoping the ground north and south, which produced in the last five weeks 79 cargas of smelting ore, containing per mine assay 96 marcs and 270 cargas of azogue, or 14 marcs per monton. The vein is 1½ vara wide, of a promising character, and likely to turn out a large quantity of azogue, with occasional bunches of smelting ore. In order to draw off the water we have resumed driving the San Andres level, which is 17 varas deeper, and which will probably effect the object in a few weeks. The 157 vara upper level, east of shaft, on the Tapona vein and the stopes in the back, continue to produce a pretty large quantity of azogue of 10 or 12 marcs, and bids fair to continue. In the San Pablo winze, sinking below the Santiago level, which is now 15½ varas deep, the vein has been intersected by a slide similar to the one met with about a month ago, which, I regret to state, has cut out nearly all the smelting ore. This occurred about the beginning of the month, and has had a serious effect upon our returns. The ley of the ores in the stopes westward has greatly fallen off, still 24 barreteros have been kept at work in these labores, and raised during the last five weeks 256 cargas of smelting ores, assaying 63 marcs and 1387 cargas of azogue of 10 marcs. Several promising levels are driven at Acosto; and the 40 vara level, east of Santa Brigida on the Acosto lode, seems to improve as it goes forward. The large workings of San Cayetano have been nearly all worked out to the level of the water; they will, however, be soon drained by the approach of the Aviadero, but there is not much ground remaining above the back of the level.

At Sacramento, the principal works are the San Isidio level north, and the workings below the adit, 240 varas north of shaft; the former is poor, but in a promising vein; the latter produces a pretty large quantity of azogue. At Rosario Mine, the appearances have of late somewhat improved. The operations in Regla Hacienda have been very favourable, the apparent loss of silver in the patio being only 3 4-10ths per cent., and of quicksilver 11 3-10ths ozs. per marc, and the cost of reduction $27 per monton. Owing to the sudden failure of the smelting ore in San Pablo and San Enrique bottoms, the returns from the Fundiciones will be only 15 bars, and the whole return 40 bars in the month, valued at $48,000; and, although the mine cost has been somewhat reduced, we shall have to pay the charges on two months' produce, so that I fear the deficiency will not be less than $10,000. With respect to the smelting ore, I have frequently noticed in former letters, that it is subject to sudden variations, and this has been particularly the case in the last two or three months, in sinking San Pablo winze, and San Enrique bottoms. I do not, however, despair of again seeing an improvement, but as our principal hope lies in finding it deeper, we have put 12 picked men to sink San Pablo winze. Enclosed you will receive a bill for 1000*l.*, which you will observe by the finance statement is as much as we can at present well spare. March account—expenditure, $55,868; returns, $52,341 Deficiency, $13,526.

UNITED MEXICAN MINES.—*Guanaxuato, April* 23.—*Mine of Rayas.*—My report on this mine on the present occasion must, I regret to say, be a continuance of the late unsatisfactory accounts. The hacienda ores have decreased both in quantity and quality. The half sales with buscones, however, show an increase in the month of $1530 5. We are now gradually gaining on the water at the rate of about a vara per week, and hope to extract better ore as we succeed in clearing the mine. I enclose Mr. Glennie's report, dated 22d inst.:—

4 weeks ending		Picked Ores.	Outlay.
March 20	Cs. 2437	$ 2834 1 4	$ 18,588 7 7
April 17	2160	4364 6 4	17,335 4 0
	Cs. 327	$ 1530 5 0	$ 1253 3 7
	Decrease.	Increase.	Decrease.

Quicksilver.—I have none of this article now in store; I must, therefore, await the return of the quicksilver employed at the haciendas, and go on with it till it is exhausted, if I do not previously receive some from England.—W. HEATH.

The following is a report on the state of the workings of the Mine of Rayas:—

April 22.—*La Purisima.*—No alteration has taken place in the system of work carried on for some time past in this part of the mine. The produce is inconsiderable in quantity and of low ley.

San Lorenzo.—The extraction of ores during the last month has been principally from the north-west side of these old workings, without any improvement having been observed in the lode, which is of great breadth, with the ore spread in small bunches of the more common classes, over the whole extent of the working. In the upper part of the pit of Santa Martha, some few bunches of rich ore have been met with, which have produced a small portion of the smelting class. It appears that the greater part of this kind of ore has now been extracted; and what remains to be thrown down is of an inferior quality. A dry wall having been raised from these two points towards the higher part of San Lorenzo, some better ores than those of the general extraction from the north-west side are now found against the upper part of the lode. The pit of Animas is yielding a small quantity of fair ore in threads and bunches; in the centre of the pit, a band of ore of good quality had been laid open during the last week. Ten pairs of barmen are employed in San Lorenzo and Animas by day, and an equal number by night.

San Cayetano.—From the various points of the pit of San Pablo, some rich ores have been extracted in small quantity, and 15 cargas of the best quality have been sent to the hacienda of Barrera for concentration, and the smelting of the richer portion. The pillar of masonry in San Francisco has been finished, and a dry wall is being raised with all practicable expedition in the pit of San Pablo, which will facilitate a further extraction of the same class of ores, as well as those of the common classes. The point in the higher part of San Cayetano is yielding a fair quantity of good ores, but the part of the lode from which these ores are procured is now very much reduced in size. Eight pairs of barmen are employed by day, and two pairs by night; some of these are occasionally employed in throwing down material for the dry walls.

San'a Cecilia.—In four weeks 239 varas have been driven in this cross-cut. Some slight appearances of ore have been met with, which, according to assay, scarcely contained any silver. The general formation of the lode is exactly similar to that of San Cayetana and Los Rayas, with the usual sub-dividing walls (relices), so frequently met with in these two divisions of the mine. The price paid to the workmen per vara, has been raised from $85 to $90. No variation has taken place in the advanced part of the level.

San Miguel.—There are at present four points among the old workings on this side of the mine, that are producing a fair quantity of ore, which is found in narrow threads and bunches, completely ramified in all directions, and subject to the usual variations so constantly observed in this division of the lode. The best point is a pillar, which is being gradually extracted, proper security being given by the day walls to the upper part of the lode. Thirteen pairs of barmen are employed by day, and an equal number by night.

Santa Teresita.—5'41 varas have been driven in this level since the last report. The lode has become more compact, and the price paid has consequently been raised to $50 per vara. There is nothing particular to remark on the present occasion in reference to any of the points worked on joint account by buscones. A small increase of workmen has produced a corresponding increase of ore, some of which proving of better quality, a slight improvement has taken place in the amount of sales. The water has been lowered 3'18 varas in four weeks, and is now becoming less attended the more it is lowered. Three or four nights in the week, an additional malacate is set to work, which is regulated by the number required by day for the extraction of ores, both on hacienda and buscones' account—the horses required for the latter operation being supplied from the great shaft.—G. R. GLENNIE.

ST. JOHN DEL REY MINING COMPANY.

The seventeenth annual general meeting of proprietors was held, at the company's office, on Friday, the 11th inst.

J. D. POWLES, Esq., in the chair.

After the usual preliminaries, the following report was read:—

The directors have now to lay before the proprietors a report of the proceedings of the past year. The directors, on the 30th November last, declared a ninth half-yearly dividend, being 10s. per share, payable on the 5th January, and issued the following circular on the occasion:—

"*Nov.* 30, 1846.—The directors have this day declared the ninth half-yearly dividend being 10s. per share, payable on the 5th day of January next.

"The gross amount of produce at Morro Velho, for the six months ending 31st August last, has been as follows:—

March, 4886*l.*; April, 5012*l.*; May, 5049*l.*; June, 4066*l.*; July, 4390*l.*; Aug., 4247*l.*		£28,170
Expenditure for the said six months	£20,319	
Duty—5 per cent. at the mine; 2 per cent. on exportation	1,972	22,291
Net profit at Morro Velho		£5879

"The following is a statement of the company's finances:—

Cash at the bankers	£7763		
Railway debentures	5000		
Bill receivable	85		
Gold in Brazil, part of the August produce coming by the packet due in January	2700	—	£15,548
Deduct—Drafts running from Brazil	£8530		
Brazilian Company's draft, due Dec. 12, on account of stores, machinery, &c., purchased from them	1460	10,090	5449
In Brazil, the amount of funds in the managers' hands, at the end of Aug. was 47,426 milreis, exchange 27d. per milrei	5335		
Owing in Brazil	4075		
Less part thereof paid here	145	3930	1405
			£6854
Dividend of 10s. per share will take			£5500

"It will be observed, that the produce exceeds that of the corresponding period of last year by the sum of 554*l.*; and that the expenditure exceeds that of the corresponding period of last year by the sum of 344*l.*

"The increase in the expenditure, as represented in sterling money, is partly occasioned by the disadvantageous course of the exchange on England, which has prevailed during the last six months in Brazil. During the corresponding six months in 1845, the average exchange at which the drafts on the company were drawn was 24 8-10d. per milrei; during the last six months it has been 26½d. The whole of the expenditure in Brazil being made in Brazilian money, this difference in the rate of exchange is an entire loss to the company, without its obtaining any equivalent in any other way. The gold being brought to England (there being no advantage in selling it in Brazil), its produce is not affected by the rate of exchange in Brazil. The loss to the company from this cause has been, during the aforesaid six months, 1275*l.* The profit for the half-year would, but for this, have been 7154*l.* By order of the directors, G. D. KROGH, Secretary."

The monthly produce of gold, from 1st March, 1846, to 28th February, 1847, has been as follows:—1846—March, 13,410 oitavas; April, 14,007; May, 13,509; June, 12,484; July, 11,745; August, 11,364; September, 12,446; October, 13,591; November, 12,887; December, 13,729.—1847—January, 12,949; February, 12,443: total, 154,584.

The 12 months' produce to February, 1846, was 128,515 oitavas.

The net profit on the working the mines for the year ending 28th February last, as will be seen by the statement in the appendix, has been 13,318*l.* 13s. 6d.

The number of tons raised of ore in the year ending 31st Dec. last, was 38,366; the number of tons raised in 1845 was 29,815.

The extent of stoping ground laid open on the 31st Dec. last, was 415 square fathoms—viz.: in the United Mines, 207; Gamba, 29; East and West Cachoeira, 179. At the end of 1845, it was 366 fathoms.

The length of the stoping ground laid open on the 31st Dec. last was 250 fathoms—viz.: United Mines, 118; Gamba, 44; Cachoeira, 88. At the end of 1845, it was 205 fms.

The effective force on the establishment, on the 31st December last was 1064.

The amount of profit made from 28th Feb. 1846, to 28th Feb. 1847, having been carried to the credit of the profit and loss account, leaves that account in credit, after paying half-yearly dividend due 5th Jan. last	£10,997	4	7
Out of which the directors have declared a half-yearly dividend (clear of income tax) of 10s. per share	5,500	0	0
Leaving at the credit of profit and loss	£5,497	4	7

A full and detailed statement of the condition of the mines, and all proceedings connected therewith, will be found in the next annual reports from Morro Velho, which contain much interesting matter. The directors have often remarked, in their previous annual reports that the supply of ore appeared to be unlimited. Capt. Treloar, the head mining captain (whose clear and intelligent report will repay an attentive perusal), says, that with 170 borers in the mine, which is about the present average number, he can raise about 3400 tons of ore per month; but he goes on to add, that, as far as the mines are concerned, they are in a condition to employ 270 borers per month, if they could be obtained; showing, not only that the lode exists in abundance, but that the mines are now satisfactorily opened out.

The course of exchange at Rio Janeiro on England, has continued very adverse to this company. It has averaged during 1846, 27d. per milrei, being full 10 per cent. higher than the average of 1845, and affecting to that extent the whole of the outlay in Brazil.

The directors having received an intimation from Mr. Herring, the superintendent, that the state of his health would render it necessary for them to make arrangements for the future conducting of the superintendence at Morro Velho, have despatched the secretary, Mr. Keogh, to Morro Velho, for the purpose of so doing. Mr. Keogh left Liverpool for Rio de Janeiro, in the *Antelope* steamer, on the 28th March.

St. John del Rey Mining Company—Balance-Sheet, May 31, 1847.

Dr.—Railway debentures	£5057	4	1
Petty cash	4	13	10
Morro Velho estate	98000	0	0
C. Herring, jun.	291	15	7
W. Harrison and Co.	4350	13	1
Stores shipped	1090	10	4
Stores bought from the Brazilian Company	2855	10	0
Barclay and Co.	2417	6	3
Ditto in dividend account	277	10	0
Bullion account	4695	13	9
Total	£119,540	18	11
Cr.—Capital stock	£98398	7	9
Bills payable	5000	0	0
Profit and loss	10997	4	7
Proprietors of forfeited shares	362	3	3
Dividends unpaid	277	10	0
Unpaid accounts	441	13	5
Suspense account	430	0	0
Salaries and wages in Brazil	3738	19	11
Total	£119,540	18	11

Statement of Receipts and Expenditure, from the 14th June, 1846, to the 31st May, 1847.

RECEIPTS.

Brought forward from last account—					
Balance at the bankers	£1654	4	1		
Cash at the office	11	2	3	1665	6 4
Proceeds of five shipments of gold				56253	2 2
Bills receivable from last balance-sheet				28	16 0
Received on account of John Stanaway, to be repaid to him in Brazil				430	0 0
Total				£58,377	4 6

EXPENDITURE.

Paid acceptances outstanding, as per balance-sheet of June, 1847	£5293	8	7
Drafts of agents in Brazil	27877	16	7
Salaries and wages in England on account of parties in Brazil	3169	0	6
Stores sent to Brazil	1649	1	11
Sending parties to and from Brazil	175	7	3
Insurances	425	17	6
Dividends—due 20th June, 1846, 5500*l.*; due 5th Jan., 1847, 5500*l.*	11000	0	0
Hire of negroes from the Brazilian Company	3125	0	0
Stores bought from the Brazilian Company	1569	7	6
Interest, 3*l.* 8s. 1d.; charges on gold, 31*l.* 15s. 11d.	35	4	0
Salaries to directors, secretary, clerk, rent, office expenses, stationery, postages, advertisements, and incidental expenses	1426	1	7
Balance at the bankers, 24177. 6s. 3d.; cash in the office, 4*l.* 12s. 10d.	2421	19	1
Total	£58,377	4	6

Profit and Loss.

Dr.—Eighth dividend, payable 20th June, 1846	£5500	0	0
Ninth ditto, payable 5th Jan. 1847	5500	0	0
Income tax	401	3	2
General expenses	1403	4	3
Balance	10997	4	7
Total	£23,802	12	0
Cr.—Balance of former account	£10425	0	1
Balance of interest account	32	18	5
Morro Velho estate mining account, for excess of receipts over expenditure, from 14th June, 1846, to 31st May, 1847	13318	13	6
Total	£23,802	12	0

The report and accounts, which appeared to give perfect satisfaction to the shareholders present, were unanimously adopted; and thanks having been voted to the chairman and directors, the meeting adjourned.

UNITED HILLS MINING COMPANY.

The annual general meeting of adventurers in this company was held at the offices, Adam's-court, Old Broad-street, on Thursday last, the 10th inst.

R. CLARKE, Esq., in the chair.

Mr. SMITH (the secretary) having read the advertisement convening the meeting, the CHAIRMAN, in a few preliminary observations, remarked, that he was sorry to say, the mine was in a worse state than at their last meeting. This was not owing to any falling off in the produce or value of the lodes; but the adjoining mine of South Wheal Towan having been suspended, the water had flowed in to the United Hills Mine, and deluged the 80 and 90 fm. levels, which, being the most productive in the mine, had caused a great falling off in the returns of ore. The underground agents had sent a most gloomy report—much more so than the directors thought the state of the case deserved; and he was happy to say, that Capt. Richards, being in London when the report arrived, was surprised at its tenor, and had written a supplementary report, which would be read. The directors considered it would be advisable to endeavour to fork the water, and prosecute the 80 and 90 fm. levels for two or three months, when they should be in a situation to form an opinion, as to the policy of the continuance of the working, or of stopping the mine, and there was no doubt sufficient ore would be raised from these levels to pay for their protection.—The SECRETARY then read the report of the underground captains, which, after explaining the appearances of the several lodes, which may be gathered from the last few weeks' reports, stated the fact of the South Towan water having drowned the lower levels, which had thrown a vast deal of extra work upon the engine—in consequence of which, continual breakages took place, and they were obliged to remain idle while undergoing repair. The supplementary report of Capt. W. Richards was more cheering; in it he stated, that had he been at home, he should not have suffered so gloomy a report to be forwarded. With a new boiler, he had no doubt they could keep the water in fork, and he called attention to the fact, that, in addition to the productive lodes in the 80 and 90 fm. levels, the 70 fm. level, at both the east and west ends, was now fast coming under the rich ore ground, gone down from the 60 fm. level.—Mr. SMITH then read the following directors' report:—

REPORT.

The directors request the earnest attention of the shareholders to the report of the mining captains of the mines, which are of a character to occasion surprise and regret. Capt. Richards, on whose opinion the directors place great reliance, does not fully concur in that report, and, being in town, has written an explanatory statement. He will be present at the meeting, and be able to afford the adventurers what further explanation they may require. During the year there has been a considerable increase both in the samplings and price of the ores raised, but this has been counterbalanced by the greater expense of the workings consequent on the influx of water, by the stoppage of the adjoining mine of South Wheal Towan—such influx had, from time to time, placed under water the lower, and which are also the richer, levels of the mine, and prevented the more effectual working of the levels at a time, when, from the rise in the standard, the ore to be raised could have been turned to the most profitable account. For some time after South Towan stopped, the directors were given to understand there was no perceptible increase in the water, certainly not more than what the engine could keep; but, since Christmas, a sudden increase of the water took place, by which the lower levels at Williams's engine-shaft, the 80 and 90 fm., were put under water. The engine at Turton's shaft, on this increase of the water, was set to work, and pumps then put down to the 56 fm., and the water effectually forked, but at so severe a strain to the eastern engine, as to cause, from time to time, various breakages of part of its machinery, which rendered necessary the stoppage of the engine for repairs, and the water again accumulated, and the lower levels of that part of the mine could not be reached to be worked, and have been for some time comparatively unproductive. The boilers being leaky, the directors had determined to purchase another boiler, in order to enable the present boilers to be successively repaired, without a stoppage of the engine; and, after that, to afford the opportunity of working with four instead of three boilers, in case of need, so as to generate more steam, and at a less expense of coal. The directors, however, were not prepared for so gloomy a report from the captains, as that sent up for this meeting, and do not themselves concur in it to the full extent, but rather suppose that the captains are acted upon by their disappointment in the less productiveness of the mine, from the repeated breakages, and do not sufficiently take into account the severe strain the machinery has undergone, and that such breakages should not again occur after the same, with the boilers, have been effectually repaired; also, that the last has been an unusually long and wet winter, such as is hardly again to be expected—still the directors think that there is sufficient in the state of things to call for a survey of the mines by competent persons, quite independent of the management, and would recommend the shareholders at once originating this.

The directors regret to state, that upwards of 1600 of the recently-created shares have not been taken up by the shareholders, thus further, to that extent, crippling the resources of the company—this they think is to be attributed, in a great degree, to the state of the money market. That the mines are intrinsically good, and will ultimately repay the outlay upon them, the directors are assured from all quarters; but the question is, as to its time and outlay necessary to realise this, and whether the limited resources of the present company are sufficient for that purpose. On this subject they would recommend the opinion of the most experienced and able miners to be taken without further delay. The directors had themselves determined on this step; but the irruption of the water has hitherto rendered the inspection of the mines a matter of difficulty, and they would now prefer the shareholders themselves taking the initiative in the matter. The directors entertain confidence in the zeal and ability of the parties at the mines; but, in case of difficulty, it is but an act of prudence to seek further and other advice.

From the statement of accounts, it appeared that the receipts from June, 1846, to end of April last, had been 14,242*l.* 2s., and expenditure 16,572*l.* 8s. 7d., showing a loss on the mine of 2330*l.* 6s. 7d.

Mr. WILLIAMS, from Cornwall, one of the directors, said, himself and colleagues had well considered what steps were best to be taken, and they recommended to adjourn to the 12th of August next. If during that time they found they could not keep the water, they should recommend a stoppage of the mine. The season, however, was the most favourable; and he had no doubt they should be able to prosecute the lower levels, and by that date be in a position to recommend to the shareholders the best steps to be taken. Should they decide upon a continuance, they would then have ample time to arrange about any additional machinery which might be required before the winter set in. He thought it requisite that an independent agent should inspect the mine when the water was forked, and he should name Capt. John Richards, of the Great Consolidated Mines.—This arrangement appeared to give entire satisfaction.—The report and accounts were then adopted, and resolutions passed, authorising the directors to take such measures for prosecuting the researches of the mine, with a view to enable them to recommend its further prosecution, or a suspension of the workings.—The meeting was adjourned to the 12th August next; and thanks having been voted to the chairman, the parties separated.

WHEAL SOPHIA MINING COMPANY.

The first general meeting of the adventurers in this mine was held at the Wheal Catherine Inn, St. James's-street, on Monday, the 7th inst.

THOMAS ANWYLL, Esq., in the chair.

The CHAIRMAN, in opening the proceedings of the meeting, observed, that many—or indeed a large majority—of the adventurers in the mine were resident in London; and hence a requisition had been signed, calling the present meeting—this being the first special meeting—while others had been held in Cornwall, in accordance with the rules by which the company was governed. The first object which appeared to him desirable to be accomplished was, the appointment of two auditors to examine the accounts and vouchers, when accordingly Messrs. Phipps and Barringer were appointed as auditors.—The accounts having been audited (which *operation* occupied above an hour), were reported as correct.

Having discussed the report of the auditors, the meeting proceeded to consider the terms of the lease, which contained the usual clauses—the term being 21 years, at 1-14th dues.

Capt. LUKE having been called upon to report upon the present state of the mine and its prospects, as also the proposed workings, he stated that, in sinking the shaft 50 fms., they would intersect three lodes—one underlaying south, and two with a north underlay; the shaft was down 6 fms., and, on being put down to the 20, he proposed to drive out, to take the south underlayer, by a cross-cut of about 10 fms.; and by an equal distance in the opposite direction, he believed the other two lodes would be intersected. An adit level was being driven on one of the lodes at about 20 fms. from surface at the present end, which was opposite Boundy's shaft, from which a cross-cut might be put out at 10 fms.; this level had been driven 77 fms., but which would be required to be further driven 120 fms., so as to take the east and west lode, which formed a caunter, where it would, however, come in at about 40 fms. The main lodes ran south-east and north-west. He (Capt. Luke) referred to the specimens submitted to the meeting, which, we may observe, were certainly of a promising character, although no ore had been raised for sampling. The country, he observed, had changed very materially, and had become far more congenial for ore. He thought that, by sinking the shaft, putting out the cross-cuts, as proposed, and continuing the level, that but little doubt could be entertained as to the result.

A resolution to the effect, that a meeting should be held in the month of June in every year, in London, when the reports and accounts should be presented, was submitted and passed. [It is a pity resolutions of this nature are not conveyed, through the medium of the Journal, in an official form, and which we think, indeed, only due to the absent adventurer.] It was resolved, that the rules, under which the company is constituted and entered in the cost-book, should be printed and forwarded to the several shareholders; whereupon it was suggested, that the last resolution, directing that an annual meeting should be held in London, should be included therein.

Mr. WARD, as purser, begged to state, that he must object to any such resolutions being embodied in the rules or conditions entered in the cost-book; he considered that the rules so entered were binding and conclusive on the adventurers, and could not be interfered with or altered. He, as purser, would readily act in accordance with the wishes of the adventurers; but he must contend against any addition to the rules, as originally agreed upon and entered in the cost-book.

A very lengthened discussion ensued, in the course of which Mr. H. ENGLISH expressed the opinion he entertained of the Cost-book System, and its merits, which he considered would be decried, if that Mr. Ward was allowed to carry his views.

Mr. W. SKELL, on being applied to for his opinion, expressed his concurrence in the views of Mr. English, and suggested that the words "as amended" should be inserted—this proposition, however, was rejected, on the reply of Mr. WARD, and the motion was consequently lost.

Thanks having been voted to the chairman, the meeting adjourned.

SILVER VALE MINING COMPANY.

A general meeting of adventurers was held, pursuant to circular, at the offices, Finsbury-square, on Friday, the 11th inst.

RICHARD HODGSON, Esq., in the chair.

The circular convening the meeting having been read, the CLERK proceeded to read the following report, with the accounts of the company, made up to and inclusive of April cost, with the reports of the agents, which will be found embodied under the head of Mining Correspondence.

DIRECTORS' REPORT.

The directors have much pleasure in calling you together at this the second annual general meeting, to lay before you the accounts for the past 12 months, which have been audited by Messrs. Goodhart and Smith—two shareholders holding a considerable interest in the mine. A report of great interest from the two agents of the mine, Capts. Richards and Eddy, will be read. Mr. Johnson has also recently visited the property, and will submit his written report to you. The chairman (Mr. Hodgson), who has very recently been on the mine, will be happy in answering any questions explanatory of the operations and prospects. You will observe, that the accounts are brought up to the end of March, including the cost for that month, and show against the mine a balance of 1676*l.*; to which add cost for April, 384*l.*—in all, 2060*l.*; which will be absorbed by the following items:—to be received for second call, 80*l.*; third ditto, 152*l.*; and on fourth call, 2484*l.*—making in all, 2716*l.*; to which is to be added, tin sold this day, 235*l.*; and silver for sale, 55*l.*—together, 2996*l.*; if to that be added five tons of tin for sale, (say) 215*l.*, such would leave to the credit of the mine the sum of 1150*l.*

Mr. P. N. JOHNSON, at the request of the chairman, then read a report he had prepared to submit to the meeting, of which the following is a copy:—

London, June 11th, 1847.—Your resident agent has given a detailed report of our operations for the last twelve months. I will, therefore, confine my observations to stating, that, with a view to economise the funds of the company, I have endeavoured to give instructions for the prosecution, in proportion to the prospects developed in the workings underground, and reduced the monthly cost of the mine in every way consistent with the effectual trial of the two principal lodes in the sett—namely, the Wheal Prosper tin, and Wheal Brothers silver lodes. In the former, finding the lode was of a hard nature in the ground worked by the former adventurers, I suspended driving such ends as were not opening tin ground, which could be worked on tribute to advantage, and confined the operations on tutwork to sinking the shaft for a 50 fm. level, which, from the alteration in the ground becoming much softer, hold out encouraging prospects. I am happy to say, that this morning's post has brought me the news of the lode being cut at this level, but not yet sufficiently seen to state its productiveness, although the indications are very encouraging. I have also been very careful in only ordering setting such ground on tribute, as would leave a profit to the adventurers, and we have now 25 men engaged in so doing. On the silver lode much has had to be done in securing the old levels of the former workers, and the ends driven some way, in order to prove their character. Some of these have been suspended, from not proving productive, and our operations are now confined to driving the 10 fm. level east, and 30 fm. level west, both of which are producing silver—the former with good indications of opening silver ground, and the latter to get under a shoot of silver ground in the 20 fm. level, and from which our late and present returns have been made. We are also clearing Wheal Brothers deep adit by two men, in order to continue the same to that part of the lode known as Oak shaft, from which good argentiferous gossan has been raised, but which cannot be sunk deeper, without some machinery for taking off the water, but which will be done by the adit alluded to at a trifling expense. In conclusion, I beg to say, that every attention is being paid to develope the resources of the property with the greatest economy; and that, as the machinery on the mine is in good order, the future cost of the mine will be less than hitherto, unless the productiveness of the lode should justify more extended operations.—P. N. JOHNSON.

The following is a statement of the accounts laid before the meeting:—

Expenditure and Receipts during the past Twelve Months.

Dr.—Expenditure, April to March, 1847, inclusive				£4767	1	5
Disbursements, direction	£200	0	0			
London management	200	0	0			
Petty cash	16	4	6			
Interest and discount	11	8	5	— 427	12	11
Balance from last account				1968	6	5
				£7163	0	9
Cr.—On second instalment	£2123	0	0			
Third ditto	2408	0	0			
Fourth ditto	76	0	0	— 4607	0	0
Tin sold	641	9	8			
Silver sold	237	12	2	— 5486	1	10
Balance against the mine				£1676	18	11

[A press of matter compels us to postpone the mine captain's report until our next.]

The report and accounts having been read, which were deemed satisfactory, a question was put by Mr. GOODHART, as to the arrears which were on the calls made; he, as an auditor of the company, had felt it his duty to direct the attention of the committee to parties being in arrear, and he should feel it his duty to bring the subject before the meeting, without the chairman was prepared to say whether any change had taken place, and, moreover, explain the course he intended to pursue. He considered that there were only two courses open to them—the one of enforcing the payment of the calls due, the other that of forfeiture—one or other was the duty of the directors or committee, and he should, for one, readily give them his vote and support; indeed, he had prepared a resolution to such effect, which he should submit to the meeting at an after period.

Mr. JAMES concurred in the view entertained by the last speaker, and considered that certain parties, whom he named, should at once either pay their calls, or have their shares forfeited; or, indeed, he, for one, thought they ought to be proceeded against, and their calls enforced.

Mr. P. N. JOHNSON, with reference to the report read by him, expressed the opinion he entertained of the sett, and of the immediate district, which he might observe that the silver district, so far as it had been demonstrated in Wheal Brothers and Wheal Sisters, as also the West Wheal Brothers or Wheal Prosper Mine, had been secured by the company. At Oaks' shaft he had himself taken pretty samples of silver, but they could not go down for water; however, they were bringing up Wheal Brothers deep adit, which would come in at 15 to 20 fathoms depth. He (Mr. J.) had known an instance of some 3000*l.* worth of silver ore being raised in the working of two or three days; and although he would not say such might be the results of their enterprise, yet, from the encouragement afforded them by indications, on which alone others had operated, he entertained little or no doubt as to the results; it was, however, a *lottery* he would admit, as the chairman had very properly said—at the same time he could not but say, that he contemplated securing the *prize*. As regards the tin lode, he could only observe, that they could have returned more tinstuff, but avoided doing so without they could see a good profit; as regards this lode, which had been taken at the 50 fm. level, such could not be ascertained as to its size, 12 inches having been cut in without wall, and worked 10 inches only high, containing capel and peach. He felt it only due to state, that the discovery had only just been made, and the letter, from which he read an extract, had only been received by him that morning—in fact, the lode had not been developed, while he was anxious to communicate the information conveyed to him.—In reply to a question of a shareholder, the CHAIRMAN stated, that with reference to the expenditure, that on the silver lode had more than been returned, and the excess must be attached to the tin lode, whereon a general conversation ensued, from which we gathered that, although the produce of silver had yielded some returns, as shown in the balance-sheet, yet such assumption of excess over expenditure was only applicable to the driving on the lode, after clearing the shafts and levels, and getting into a state of working.

Mr. JOHNSON wished to observe, with reference to some remarks made on the tin lode, that a considerable improvement had taken place in the nature of the ground in sinking; that they were now some 3 or 4 fms. under the 40 fm. level, the ground being 20*l.* to 22*l.* per fm., whereas 45*l.* had been before paid.

A further discussion took place, as to the forfeiture of shares, when Mr. GOODHART proposed, that all shares on which the calls made in the past year had not been paid, should be declared forfeited; in the end, however, the resolution was withdrawn—it appearing that the slight defalcations, with the exception of the last call due that day, would, doubtless, be paid, and power given to the directors to act upon the rules entered in the cost-book, with reference to any defalt, should such take place. From the observations of the Chairman and Mr. P. N. Johnson, it was clear that with the money in hand, arising from the present call, there would be no occasion, even under circumstances they could not then contemplate, that any further call would be required for the next 10 or 12 months. It further appeared, that the monthly cost was about 350*l.*, which, assuming a loss of 100*l.* per month beyond the returns of ore, would be met by the present capital, assuming the calls to be paid up, which, with a trifling exception, might be considered safe.

Mr. JOHNSON stated that, supposing the tin lode should be abandoned, which he would not, however, assume for one moment, the silver lode could then, in such case, be worked by water-wheel. As regards the tin lode, it was undetermined as to whether they should sink down to the 60 fm. level.

In the end, the reports of the directors, with those of the agents, were received and approved, as also the accounts; and thanks having been given to the chairman and auditors, &c., as appears by the resolutions in our advertising columns, the meeting separated.

CARN PERRAN.—A meeting of the adventurers was held at the mine on Friday, the 4th inst., when the accounts were presented, showing—

Labourers' wages, from July, 1847, to end of April, 1847				£1449	5	6
Merchants' bills, ditto				312	13	6 — 1761 18 0
By sale of copper ore	£ 672	4	0			
Ditto tin-stuff, &c.	2094	10	10 — 2716	14	10	
Deduct dues				150	18	4 — 2565 16 6
Showing a profit of				£ 803	18	6

Deduct balance from last account, 249*l.* 7s. 4d., leaves now in hand, 554*l.* 11s. 2d.

The accounts were examined and allowed; and the resolutions of the Trenow adventurers, dated the 8th of May, having been read to this meeting, it was considered necessary to ascertain the liabilities of the Trenow adventurers, and that it is expedient to settle the same before any valuation of materials be made: that the following adventurers form a committee, to determine the liabilities, and to confer with Trenow adventurers on the subject—viz.: F. Hill, J. Kendall, jun., N. Harvey, and the purser; and as soon as the committee have ascertained the exact amount of liability, they are authorised to employ Capt. J. Richards, or some other competent person, to meet any person appointed by the Trenow adventurers, to value the property in both mines—soon after which a meeting of the adventurers, in both mines, be called, to ascertain who will continue or relinquish their shares.

BUDNICK CONSOLS.—A meeting of adventurers was held at the mine, on Monday last, when the accounts, of which the following is an abstract, were passed:—To costs and merchants' bills for February and March, 1504*l.* 0s. 8d.; by ores sold (less dues), 1052*l.* 2s. 2d.: balance against adventurers, 451*l.* 18s. 6d.

CALLINGTON MINES.—Statement of accounts for 3 months, ending March:—

To amount of January cost				£1804	1	8
Ditto	February ditto			1854	1	4
Ditto	March ditto			1745	8	7
Directors' attendances, 63*l.* 10s.; London management, 50*l.*				113	10	0
Auditing, 21*l.*; discount, 18*l.* 16s.; law charges, 57*l.* 6s. 9d.				97	2	8 — 5613 4 3
Fourth dividend				1000	0	0
Reserved fund				100	0	0 — 1100 0 0
Balance						1062 16 1
Total						£1776 0 4
By amount of January returns				£2059	14	0
Ditto	February ditto			2159	15	5
Ditto	March ditto			2081	18	1
Kelly Bray cost—January, February, and March				401	13	10 — 6699 1 4
Balance from last quarterly account						1076 19 0
Leaves a total of						£7776 0 4

Balance, 1062*l.* 16s. 1d.—Reserved fund, 404*l.* 12s. 2d.

At the meeting of directors, on Wednesday last, they declared a dividend of 1*l.* per share, payable on the 23d inst., on which day the quarterly meeting will be held, of which notice has been duly given.

EAST BIRCH TOR.—At an adjourned meeting, held at Farley's, Golden Lion Inn, Plymouth—Mr. J. OFFORD in the chair,—the accounts stated that the sale of tin since January, 1846, amounted to 718*l.*, and that about 30*l.* worth more was at *grass*, and that there was a balance of 180*l.* against the adventurers. It was resolved, that 10s. per share be paid per month, for 24 months; that the new shares partake of the proportion of the old shares, and that the old shares shall become liable for their proportion of the expenses of the mine (if any), after the expiration of the 24 months, and the expenditure of the 10s. per share above-mentioned. That Mr. J. Carpenter be appointed inspecting agent at 2*l.* 2s. per month, and that Mr. A. Rowe be appointed purser at a salary of 3*l.* 3s. per month.

SOUTH FRIENDSHIP WHEAL ANNE.—At a general meeting of shareholders, duly convened, and held at the account-house, on Monday last—W. B. CUDLIPP, Esq., in the chair—a letter was read, which had been received by the purser, requesting the restoration to the defaulter of 50 shares, which had been declared forfeited at the last general meeting, in consequence of the non-payment of calls. It was, therefore, resolved—That the meeting being of opinion, that the 50 shares forfeited by ——— should be restored to him, under the power contained in the rules, upon his paying all the back calls due thereon; the purser be requested to convene a special meeting, to be held at the account-house, on Monday, the 21st of June, to consider the propriety of restoring such shares, upon the payment of such sum.—A further call of 1*l.* per share was made, to be paid within 21 days, when the meeting adjourned.

WHEAL COMFORT.—A meeting of adventurers took place at the mine on Tuesday last, at which the following accounts were submitted and allowed, and the balance ordered to be divided and collected:—To costs, &c., including cost of new engine, from January 1st to May 31st, 2248*l.* 12s. 11d.—By ores sold (less dues), 1538*l.* 1s. 7d.: leaving balance of 710*l.* 11s. 4d.

WHEAL SETON.—At the usual two-monthly meeting of adventurers, held at the account-house, on Tuesday, the 8th of June, the following accounts were presented:—By balance at last meeting, 2036*l.* 2s.; ores sold (less dues), 4871*l.* 5s. 7d.; sale of materials, 7*l.* 12s. 6d. — 6915*l.* 0s. 1d.—To costs and merchants' bills for March and April, 3049*l.* 7s. 7d.; dividend of 20*l.* per share, 1980*l.*: leaving balance in hand of 1885*l.* 12s. 6d.—The accounts having been seen and examined, were allowed; it was resolved, that a dividend of 20*l.* per share be made and paid to the adventurers forthwith, and that the balance of 1885*l.* 12s. 6d. in favour of the adventurers, be carried to the credit of the next account; that the next meeting be held on the mine, on Tuesday, the 10th day of August next.—[The agent's report will appear in our next.]

MINING MEETINGS.—The remainder of the meetings will be found on the 8th page.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

ASHBURTON.—The Whiddon Mines are still presenting very favourable indications of well repaying their lucky shareholders. The lodes of tin and copper recently discovered are big, and of very fine quality.

CLEVELAND.—I beg to advise you, that Cleveland is improving. The two lodes, in going west, form a junction, and improve in value as they advance, both ends being 3 ft. wide, producing saving work.

CONDURROW is still improving, having a lode in the back of the 50 fm. level worth 20*l.* a fm., and the end just beyond it exceedingly promising. Few sellers in the locality.

EAST WHEAL ROUGH TOR.—This extensive sett is situate in the parish of St. Cleather, and immediately adjoins the Great Wheal Rough Tor. The lodes of the Great Wheal Rough Tor have been cut to within a few fathoms of this sett, exhibiting extraordinary features of size and quality, being from 15 to 20 ft. in width, and composed of the richest gossans at surface, followed by floors of capels, thickly spotted with copper ore. All the lodes of the Great Wheal Rough Tor pass through the East Wheal Rough Tor; and as the ground declines to a deep valley, at the eastern boundary of the sett, the lodes can be opened upon by adits, and considerable backs obtained, by driving towards the workings on the lodes in the Great Wheal Rough Tor. The mine is divided in 2048 shares, and conducted upon the Cost-book System.

PLYMOUTH WHEAL YEOLAND.—I was at Plymouth Wheal Yeoland with Capt. Edwards yesterday, and in consequence of a little water being in the bottom of the shaft, the men were put to drive on the lode, and were bringing out splendid stones of tin—some of which I broke myself, and brought to surface, and were richer than any I have yet seen. The lode is about 3 ft. wide, and very good throughout.

SCILLY.—A practical miner has been here from the neighbourhood of Penzance, who is said to have discovered a lode which has a very promising appearance, a great quantity of mundic being found, also some copper and tin.

WHEAL AARON.—This mine is situate in the estate of Little Collan, in a parish of the same name; it is about 4 miles from St. Columb Major, and 2½ miles from St. Columb Minor, 4 miles from Newquay and Cranstock, and about the same distance from that well-known mine, East Wheal Rose, and only a short distance from Trewallack; on the south-east is a prosperous mine belonging to Lord Vivian, which lodes pass through the sett; it is in the midst of a mining locality (particularly lead)—it is held under a grant from J. Hoblyn, Esq., at 1-15th dues at and above the adit level, and 1-18th below. There are a great number of lodes which pass through the sett, some of which are east and west lodes, and others north and south; on one of the north and south lodes there has been an adit driving for somewhere about the last two years, at the mouth of which there is a stream of water, running large enough to work a very powerful water-wheel; the adit is driven about 100 fms.; the lode in course of driving has been composed of a beautiful gossan, manganese, interspersed with chrystallised copper, and spots of lead, and there is now in the bottom of the level a good branch of manganese; the lode at present is about 5 ft. wide, and has very much the appearance of East Wheal Rose lode at the same depth. In driving the adit on this lode there has been five or six lodes intersected, most of which are composed of spar, mundic, spots of copper and lead—one of which, 2½ ft. wide, is almost entirely composed of mundic, and spots of copper and lead. About 12 fms. to the south of the present end there is a shaft sunk about 7 or 8 fms. on the course of a lode; but it is not yet ascertained whether it is the same lode or not, as it assumes a very kindly appearance, and there has been several other lodes seen on the backs, in all of which there is mineral. On the south part of the sett the adit will be from 30 to 40 fms. deep, present depth from the surface 14 or 15 fms. The sett is nearly half a square mile, and it is calculated by almost all who have seen it, that, by a moderate outlay, it will make a flourishing mine—it is working on the old Cost-book Principle, and now in 140 shares.

WHEAL FORTESCUE.—This sett is an extensive one, although this is not generally known to be the case, and so situated as to be exceedingly valuable, if either of the adjoining mines—viz.: Wheal Williams, Lamberoos, or West Wheal Maria—should cut a good course of ore in a favourable position relative to it. The portion of ground, however, through which the Maria lode passes, is comparatively small, perhaps 40 or 50 fms. wide; yet this limited shoot alone would return handsome dividends, if it should prove to be as rich as the 40 fm. level, coming westward from Wheal Maria, computed to be worth 80*l.* per fm. by the report, the end of which level is only a moderate distance from the Fortescue boundary. The capel Tor lode is a parallel lode, further north, partially tried several years since, concerning which report states that a few tribute pitches might even now be set, if the water was forked. It seems, therefore, to be a reasonable suggestion, that further inquiries should be made respecting it. Expectation is on tiptoe, for important discoveries to be made in some of the neighbouring mines.

A valuable gold watch, with massive gold guard chain, was lately presented to Mr. Strong, of Weardale. On the watch was engraved the following inscription:—"Presented to James Strong, Esq., engineer, as a tribute of respect, for the valuable discoveries of iron ores that he has made in Weardale."—*Newcastle Advertiser.*

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 7 per Cent., 196
3 per Cent. Reduced Ann., 87½ ¼
3 per Cent. Consols Ann., 88½ ¼
3 per Cent. Annuities, —
3¼ per Cent. Ann., 88½ ¼
Long Annuities, 9
India Stock, 10½ per Cent., —
3 per Cent. Consols for Acc., 88½ ¼
Exchequer Bills, 1000*l.* 2d., 3 6 pm.
Belgian Bonds, 4½ per Cent., 93½
Dutch, 2½ per Cent., 58½ ¼
Brazilian, 5 per Cents., 83½
Chilian, 6 per Cents., —
Mexican, 5 per Cents., 20½
Spanish, 5 per Cents., 22 2¼
Ditto 3 per Cents., 34 3¼
Portuguese, 5 per Cents., 80½
Russian, 5 per Cents., 110 9½

MINES.—We have had but very little improvement in the mining share market this week, although there is no scarcity of buyers at lower quotations. Reports from the mines, received this week, are generally of a favourable character—in several instances, of great improvement—and advances of price has been the result. Shares in the following mines have been transacted since our last—viz.: Stray Park, West Wheal Maria, St. Michael Penkivel, Exmoor Eliza, Plymouth Wheal Yeoland, Pennant, Dartmoor Consols, Franco, Callington, Wheal Providence, Wheal Mary Ann, Devon and Courtenay, Alfred Consols, North Roskear, Fortescue, Trehane, Birch Tor, Coatlith Hills, &c.

West Wheal Maria improved upon last week's quotations during the early part of the week; since they have been done at less.

Wheal Franco have been in demand, and several transactions have taken place, in consequence of a dividend to be declared at the next meeting, when a considerable balance will be left in the bankers' hands. We are pleased to find this mine is about accomplishing what the enterprising adventurers have anticipated for years, through difficulties and obstacles.

In Plymouth Wheal Yeoland they have a fine course of tin, which has been ascertained to continue in depth, as far as they can sink for water, and is estimated worth from 160*l.* to 170*l.* per fm. A grant, we learn, has been obtained for the adventurers of the sett east, immediately adjoining and near the present discovery, through the indefatigable exertions of Mr. J. E. Square, one of the adventurers, whose disinterestedness in the matter will not go unrewarded, as we hear the directors, at their weekly meeting on Wednesday last, declared their fifth dividend of 1*l.* per share, made payable by the 23d and succeeding Wednesday. By the accounts furnished, we find, after payment of dividend of 1000*l.*, they will have a reserved fund of 467*l.*

Wheal Trehane adventurers held their two-monthly meeting on the 1st inst., when they made their second dividend of 1*l.* per 256th share, leaving a large balance in hand, with improving ends and levels.—Wheal Seton is reported to be looking admirably; a dividend of 20*l.* per share, we hear, has been made.

The meeting of St. John del Rey Company held yesterday confirmed a dividend of 10s. per share, being the ninth half-yearly dividend.

There have been several transactions in foreign mine shares this week, as we learn that business has been done in Bolanos, St. John del Rey, Imperial Brazilian, Australian, Real del Montes, and Kinzigthals.

RAILWAYS.—At the commencement of the week, prices were decidedly less favourable than at the time of publication of our last Number—suffering doubtless from the depreciation in the value of consols, and the advancing tendency of the corn market. Although some slight reaction took place during the week, the share market generally may be stated to have been dull, and very little alteration has taken place in the prices of any shares. The fluctuations of the share market appear to follow close on the change in the quotations of consols.

MEETINGS.—DUNDEE AND ARBROATH: half-yearly meeting; a dividend of 4 per cent. for the half-year was declared.—NORTH KENT: a meeting for winding up; after retaining a balance sufficient to cover all liabilities, there was 6s. 3d. per share payable on the 11th instant.

At Messrs. Lamond's sale, both Tuesday and Friday, prices were somewhat better than at the corresponding period of the previous week, and business was decidedly of a firmer character.

HULL, THURSDAY.—The markets have fluctuated since our last. On Saturday, notwithstanding the firmer tone of the London and Wakefield corn market on the previous day (Friday), prices were well maintained; but the decided advance in wheat on Monday, in Mark-lane, had the effect of depressing our market yesterday to some extent. To-day less disposition is shown to sell, but the price of corn is the chief regulator of the share market just now, and will continue so for some time. A petition against Mr. Strutt's Railway Financial Interference Bill has been unanimously signed to-day, and will be found on the Stock Exchange to-morrow. The petitioners invite Government interference so far as the prevention of accidents is concerned. This should be clearly understood, as it is the principle of meddling with private enterprise that they alone deprecate.

RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2730 miles of railway, was 190,775*l.*, thus accounted for:—107,864*l.* for the conveyance of passengers only, 40,342*l.* for the carriage of goods, and a remainder of 42,569*l.* for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 38,257*l.*, when the mileage was about 2,292.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	Traffic Returns. 1847			1846
Arbroath and Forfar	15	£142,900	3 p.c.	£ 252	0	0	£ 216
Chester and Birkenhead	15	658,293	2½	761	0	0	785
Dublin and Drogheda	35	689,248	3½	876	0	0	913
Dublin and Kingstown	6	349,736	9	1090	16	4	1383
Dundee and Arbroath	16½	156,323	6	349	0	0	295
East Lancashire	28	814,417	—	1048	0	0	—
Eastern Counties	181½	6,513,026	7	11527	12	3	10006
Eastern Union	17	227,253	—	1402	0	0	—
Edinburgh and Glasgow	46	2,112,136	6	3336	0	11	3515
Glasgow, Paisley, and Ayr	53	1,567,281	7	2661	0	0	2309
Glasgow, Paisley, & Greenock	22	835,918	2	1171	0	0	1130
Great Southern and Western	56½	1,343,718	—	1330	0	0	—
Great Western	241	9,714,939	8	23391	0	0	21793
Ipswich and Bury	26½	303,766	—	—			—
London and North Western	378½	18,042,004	10	45994	0	0	47900
London and Blackwall	4	1,102,717	1½	1343	0	0	1659
London, Brighton, & South Coast	112	5,109,667	7	8164	0	0	6498
London and South-Western	127	4,278,789	9	9419	10	7½	8610
Manchester & Leeds	117½	5,036,391	5½	9084	0	0	7608
Manchester, Sheffield, & Lincolnsh.	49½	1,678,108	5	2248	0	0	3509
Midland Company	329½	7,862,274	7	20097	0	0	19747
Newcastle and Berwick	9	1,184,079	5	927	0	0	—
Newcastle and Carlisle	65	1,184,080	5	2289	0	0	1831
Norfolk	70½	1,199,689	7	2068	0	0	1603
North British	72½	1,459,958	—	1743	0	0	—
Preston and Wyre	30	432,014	2½	—			1245
Shrewsbury and Chester	15	354,945	—	382	0	0	1244
South Devon	20	1,061,283	5	1231	0	0	—
South-Eastern	148½	5,888,411	3½	8715	15	3	10483
Taff Vale	30½	888,411	6½	1422	0	0	1422
Ulster	25	358,353	5½	796	0	0	598
York and Newcastle	183½	1,712,317	9	7774	0	0	7069
York and North Midland	162½	2,483,256	10	6311	0	0	5618

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 14 6—Carr's Hartley 16—Chester Main 14 3—Davison's West Hartley 16—Dean's Primrose 14—Delaval Hartley 14—Dipton Tanfield 14 6—Hasting's Hartley 16—Holywell Main 16 6—Nelson's West Hartley 16—New Tanfield 15 3—Ord's Redheugh 14 6—Ravensworth's West Hartley 16—South Peareth 14—Stanley Tanfield 14 9—Tanfield Moor 17 6—West Hartley 16—Wylam 15 3—Wall's End Brown's Gas 13 6 Hebburn 14—Killingworth 14 3—Wharncliffe 14 6—Eden Main 15—Braddyll's Hetton 17—East Hetton 14 6—Haswell 17 3—Hetton 17 3—Lambton 16 9—Russell's Hetton 16 9—Stewart's 17—Hudson's Hartlepool 15 3—High Thornley 14 3—Adelaide 16 3—Seymour Tees 15—Tees 16 9—Whitworth 14—Derwentwater Hartley 16—Howard's West Hartley Netherton 16—Sidney's Hartley 16.—Ships at market, 145.

WEDNESDAY.—Adair's Main 14 6—Carr's Hartley 16—Chester Main 15—Davison's West Hartley 16—Delaval Hartley 14 6—Dipton Tanfield 15—Hasting's Hartley 16—Holywell Main 16 6—New Tanfield 15 6—Ord's Redheugh 15—Ravensworth's West Hartley 15 6—Stanley Tanfield 14 9—Townley 15 6—West Hartley 16—Wylam 16 3—Eden Main 16—Derwentwater Hartley 16—Howard's West Hartley Netherton 16—Wall's End Killingworth 14 6—Bewicke and Co. 15 6—Brown's Gas 14—Clennell 14 6—Braddyll's Hetton 17 6—Bell 16—East Hetton 15—Haswell 17 9—Hetton 17 6—Lambton 17 3—Stewart's 17 6—Hudson's Hartlepool 15 9—High Thornley 15—Heugh Hall 15 3—Kelloe 17 3—Tees 17 6—West Tees 14 6.—Ships at market, 98; sold, 65; unsold, 33.

FRIDAY.—Adair's Main 15—Buddle's West Hartley 16 6—Carr's Hartley 16 6—Chester Main 16—Delaval Hartley 15—Dipton Tanfield 15—Hasting's Hartley 16 6—Holy Main 17—New Tanfield 16—Ord's Redheugh 15 3—Stanley Tanfield 15—Townley 16—West Hartley 16 6—Eden Main 16—Derwentwater Hartley 16 6—Wall's End Brown's Gas 14 6—Hennell 15 6—Wharncliffe 16 6—Braddyll's Hetton 18—Haswell 18 3—Hetton 18—Lambton 17 9—Shotton 17 6—Stewart's 18—High Thornley 16—Heugh Hall 17 6—Adelaide 17 6—Tees 18.—Ships at market, 49; sold, 34; unsold, 15.

NEW PATENTS.

R. Clark, West Strand, lamp manufacturer, for certain improvements in the production of artificial light, and in burners, lamps, and candlesticks.

S. Ellen, Grange-road, Bermondsey, gentleman, for improvements in the manufacture of both hide leather and other oiled leathers.

C. Jarrard, Leicester, machinist, for improvements in machinery for cutting wood for the manufacture of bobbins and other articles.

W. Darling, Glasgow, Scotland, ironmonger, for improvements in moulding, and in the manufacture of certain articles of cast-iron.

B. Azulay, Rotherhithe, Surrey, printer, and A. Solomons, of the city of London, merchant, for certain improvements in the manufacture of charcoal and other fuel.

H. Cox, Chapel-place, Battersea-fields, for improvements in preserving and preparing of wood, bricks, tiles, and other substances.—*Mechanics' Magazine.*

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwesain	7	12
512	Albert Consols	1	2½
1024	Alfred Consols	4½	35
238	Andrew and Nangiles	28½	16
10000	Ayrshire Iron Company	2½	2 ¼
1624	Balleswidden	9	18
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	2	—
1000	Barristown	4½	18
4000	Bedford	3½	3½
128	Besore Lead Mine	14	10
315	Birch Tor Tin Mine	24½	6
8000	Blaenavon	50	30
100	Botallack	175	200
120	Brewer	5	7
10000	British Iron, New, regis.	10	17½–18½
—	Ditto ditto, scrip	10	19
128	Budnick Consols	52½	40
128	Burthy	20	21
100	Bwlch Cwmerfin	20	—
128	Callestock	17	50
1000	Callington	19	29
256	Caradon Consols	47	3½
256	Caradon Copper Mine	9½	1
256	Caradon Mines	22½	17
256	Caradon United	24	10
256	Caradon Wh. Hooper	20	4
1000	Carn Brea	15	100
2048	Carmarthen Consols	2	2
112	Charlestown	200	100
166	Cleveland	9	6½
512	Coatlithe Hill	½	1½
1900	Combmartin	7½	4½
500	Comblawn	1½	1½
128	Comfort	45	80
256	Condurrow	20	30
2560	Cook's Kitchen	14	5½
5000	Coombe Valley Quarry	1	1½
1000	Copper Bottom	1	5
1024	Cosheen	4½	10
240	Craddock Moor	15½	15
128	Creeg Braws	120	150
500	Cubert Mine	12½	25
2048	Dartmoor Consols	2	3
7100	Derwent	8½	5
1024	Devon & Courtenay Con.	5½	2½
1000	Dhurode	2	5
186	Dolcoath	30	50
2560	Drake Walls	4	4
10000	Durham County Coal	45	9
256	East Alvenney	3	10
112	East Caradon	42	42
2048	East Crowndale	4½	1½
512	East Combe Silver-Lead	6½	6½
128	East Pool	5	20
100	East Relistian	22	40
9000	East Tamar Consols	1½	2
—	East Wheal Albert	1	3
94	East Wheal Crofty	280	310
256	East Wheal Fortune	2	3
128	East Wheal Rose	50	1400
2048	East Wh. Rough Tor	—	2
—	East of Scotland Iron Co.	2½	1½
123	East Wheal Seton	14	20
256	Exmoor Wh. Eliza	3½	10
512	Fowey Consols	40	45
20000	Galvanised Iron Co.	10	9½
10000	Gen. Mining Co. for Irel.	2	1½
2048	Georgia Tin Mines	1½	1½
256	Gonamena	31½	70
128	Goonvrea	4	½
244½	Grambler & St. Aubyn	—	20
100	Great Consols	1000	400
256	Great Callestick Moors	22	25
2560	Great Michell Consols	1½	4
256	Great Resugga Moor	2	4
512	Gt. Wh. Rough Tor Con.	6½	38
1500	Great South Tolgus	2	2
100	Grogwinion	5	—
1000	Gunnis Lake	1½	3
256	Gwinear Consols	5	18
1000	Hanson	14	2
1000	Harrowbarrow Old Mine	8½	2½
800	Hawkmoor	3	2
6000	Heignston Down Con.	½	2½
256	Herodscombe	½	6
256	Herodsfoot	14	11½
10000	Hibernian	12½	1
—	Hobb's Hill	4	3
1000	Holmbush	18	8
827	Kirkcudbrightshire	4½	10½
2048	Lamherooe Wh. Maria	9	3
74	Lanarth & Penstruthal	—	10
2048	Lanivet Consols	4	2
200	Larkholes	1	3
160	Levant	—	90
1000	Lewis	15	6½
1280	Llancynfelin	6	—
1000	Llwyn Malees	5	—
3600	Llynvi Iron	50	60–65
256	Lostwithiel Consols	7	7
128	Ludcott	3	3
4000	Marke Valley	10	3½
5000	Mendip Hills	2	1½
128	Metha	23	120
20000	Mining Co. of Ireland	7	7½
256	New East Crowndale	3½	3½
128	North Fowey Consols	25	20
100	North Pool	45	225
70	North Roskear	10½	400
512	North Treburget	2	3
100	North United	41	20
256	North Wh. Abraham	½	12
262	North Wh. Leisure	1½	3½
128	North Wh. Providence	2½	8
15000	Northern Coal Co.	23	2
1200	Old Delabole Slate Co.	25	50
2000	Pantdrainiog Slate Co.	2½	2½
128	Par Consols	900	1000
256	Penhallow Moor	15	4
4000	Pennant	1	3
100	Penrhiw	30	65
256	Pentuan Wheal Mary	2½	6
128	Pen-y-Cefn Mine	50	55
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	65
512	Plymouth Wh. Yeoland	4½	25
2048	Prince Edward	1½	1½
112	Providence Mines	35	45
256	Redruth Consols	3	10
10000	Rhymney Iron	50	30
256	Rose Consols	10	11
1000	Rosewall Hill	1	5
256	Rosewarva Mines	—	12
—	Shotts Iron Company	50	65
2500	Silver Valley	4	2
128	South Caradon	10	410
2000	South Dolcoath	2	2
256	Sth. Friendsh. Wh. Ann	14	14
200	South Harvannah	23	25
9000	South Tamar	½	½

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
[illegible]	South Tolgus	2½	18
80[illegible]	South Towan	10	1½
[illegible]	South Trelawney	15½	10
12[illegible]	South Yeoland	16½	20
128	South Wheal Basset	110	75
124	South Wh. Francis	160	220
256	South Wh. Hope	—	5
1000	South Wh. Maria	2½	2
256	South Wheal Rose	11½	1
10000	Southern & Western, Irish	2	4–5
280	Spearne Moor	30	40
256	St. Austell Consols	8	14
94	St. Ives Consols	—	220
128	St. Michael Penkivel	5	10½
1000	Stray Park	43	29
9600	Tamar Consols	5	5½
1024	Tavy Consols	3½	5–5½
6000	Tincroft	7	9
3000	Tin Vale Consols	½	1½
256	Ting Tang	15	10
128	Tokenbury	143½	10
256	Trehane	2	22
5000	Treleigh Consols	6	4
2000	Trenance	2	—
256	Trenow Consols	30	25
96	Tresavean	10	250
120	Trethellan	5	27½
120	Treviskey and Barrier	130	160
256	Trewollack	20	20
128	Trewellard	12	26½
6000	United Hills	5	½
100	United Mines	300	400
256	Wellington Mines	15	30
128	West Basset	45	25
256	West Caradon	20	168
128	West Cargoll	2	12
512	West Fowey Consols	40	15
256	West Grambler	7	8
—	West Kekewich Consols	—	3
256	West Providence	1	18
200	West Seton	40	70
—	West of Scotland Iron Co.	210	212
120	West Trethellan	5	35
256	West United Hills	2½	4
256	West Wh. Friendship	7½	4
3845	West Wheal Jewel	11	2½
2560	West Wh. Maria	1½	1½
256	West Wheal Shepherd	5	2½
256	West Wheal Tolgus	21½	3
256	West Wheal Treasury	19	18–20
5200	Wicklow Copper	5	12
184	Wheal Adams	41	10
1000	Wheal Agar	—	8
256	Wheal Albert	10	8
128	Wheal Acland	13	2
256	Wheal Allen	2	5
237	Wheal Anderton	16½	26
128	Wheal Aun	—	50½
128	Wheal Arvose	3½	4
1024	Wheal Ash	2½	12
120	Wheal Bal	5½	20
2560	Wheal Barbara	1½	3
256	Wheal Benny	6½	5
256	Wheal Blencowe	8	12½
256	Wheal Bucketts	20	22
256	Wheal Byon Consols	½	½
256	Wheal Calstock	3	4
136	Wheal Clifford	190	190
1024	Wheal Concord	6½	1½
128	Wheal Courtenay	—	20
6000	Wheal Curtis	1½	1½
256	Wheal Dyke	12	13
256	Wheal Fortescue	5½	12
512	Wheal Fortune Consols	3½	6½
2048	Wheal Frederick	2	2
388	Wheal Franco	27	40
1024	Wheal Grace	2	2½
128	Wheal Harriet	45	50
2048	Wheal Holwell	1½	1½
256	Wheal Jane	16	30
256	Wheal Kekewich	4	4
256	Wheal Louisa	7½	12
112	Wheal Margaret	79	250
256	Wheal Maria (Hayle)	19	15
1024	Wheal Maria	1	350
4000	Wheal Martha Consols	5	2
512	Wheal Mary Ann	5	24
256	Wheal Mary Consols	38	25
256	Wheal Mary (Lanivet)	6½	4
256	Wheal Maude	½	1½
128	Wheal Pollard	12½	12
210	Wheal Prospect	4	7
128	Wheal Reeth	1	17
128	Wheal Rose	60	50–55
2048	Wheal Samson	—	20
99	Wheal Seton	214	850
256	Wheal Sisters	29½	35
256	Wheal Sophia	3½	10
128	Wheal Spearne	10	75
128	Wheal St. Ann	9	15
260	Wheal Trelawney	7½	115
256	Wh. Tremaine (St. Ervan)	1½	20
256	Wheal Tremayne	35	32½
128	Wheal Trew	20	21
256	Wheal Trevenna	3	4
92	Wheal Tryphena	140	300
128	Wheal Venland	12½	10
256	Wheal Vlow (Perranz.)	½	½
184	Wheal Vyvyan	—	60
256	Wheal Williams	2	18

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14½	4
15000	Asturian Mining Co.	10	7
20000	Australian	2	6½
10000	Anglo-Mexican Co.	100	1
12374	Ditto Subscription	25	2½
3000	Bolanos	150	6½
2000	Ditto Scrip	15	6½
12000	Brazilian Imperial	20	2½–3
10000	Cobre Copper Co.	40	25½
8500	Colombian Co. regis.	55	} 4½
5000	Ditto Scrip	5½	}
5000	Copiapo Mining Co.	14	3½
10000	General Mining Ass'n.	20	15½
5000	Kinzigthal Mining Ass.	2	3
20051	Mexican Company	59	—
2000	Mexican & South Amer.	7	3
5000	Mocaubas & Cocaes	25	6½
29320	{ Rl. del Monte, regis. / Ditto unregistered }	28½	av. 3½
	Ditto Red Debentures	—	16
	Ditto Black ditto	—	14
	Ditto Loan Notes	150	97½
7000	Royal Santiago	10	5
2000	Pachuca Mines	4	4½
11000	St. John del Rey	15	7
13174	United Mexican	28½	2½

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

JOINT-STOCK BANKS.

Shares.	Companies.	Paid.	Div. p. cent.	Price.	
22,500	Australasia	£40	£3	£21½	22
20,000	British North American	50	5	44	45
20,000	Colonial	25	6	15½	16
—	Commercial of London	20	6	22	23
4,000	Ionian State	25	6	24½	25
60,000	London Joint-Stock	10	6	16	
30,000	London and Westminster	20	6	26	
10,000	National Provincial of England	35	5	36½	38½
20,000	National of Ireland	22½	5	20½	21
20,000	Provincial of Ireland	25	8	44½	45½
4,000	Ditto New	10	8	16	
20,000	Union of Australia	25	6	24	
10,000	Ditto New	2½	6	2½	2½
60,000	Union of London	16	5	12	12½

M. Devarenne, a founder at Berlin, has received an order from Helsingfor the capital of the Grand Duchy of Finland, to cast in zinc, for the cathedral of that city, colossal statues of the twelve apostles, after those sculptured in marble by Thorwaldsen, for the church of our Lady at Copenhagen. Six of them have been cast, and are now to be seen in the studio of M. Devarenne. They are the largest works in zinc ever executed, and are finished in a style of excellence that has obtained the admiration of every artist who has examined them.

Cradley Heath, Rowley Regis.—The miners employed in Mr. Purser's Colliery, being apprehensive of fire-damp, determined on ascending—accordingly, six or seven of them got into a skip, when Joseph Perry fell out, and was killed.

Stannaries of Cornwall—In the Vice-Warden's Court.

PURSUANT to a DECREE of the VICE-WARDEN'S COURT, made in the cause of "Hill *v.* Vigurs," the creditors in respect of the ROYAL POLBERROW MINE, otherwise the ST. AGNES CONSOLIDATED MINES, in the parish of St. Agnes, within the said Stannaries, are, on or before the first day of July next, to come in and PROVE THEIR DEBTS before the Registrar of the said Court, at his office in Truro; or, in default thereof, they will be peremptorily excluded the benefit of the said Decree.—Dated Registrar's Office, Truro, the 10th day of June, 1847.

VALUABLE SPARE MINE MATERIALS FOR SALE.—MR. PRYOR is favoured with instructions to SELL, by PUBLIC AUCTION, on Monday, the 21st of June, by Eleven o'clock in the forenoon, at WHEAL JEWEL MINE, parish of Gwennap, the following VALUABLE MINING MATERIALS, consisting of 1 39-in. cylinder steam-engine, 2 pair of excellent shears, 28 9-ft. 10-in. pumps, 16 9-ft. 7-in. ditto, 7 9-ft. 9-in. ditto, 5 6-ft. 10-in. ditto, 6 9-ft. 8-in. ditto, 4 9-ft. 6-in. ditto, 3 3-ft. 10-in. matching-pieces, 1 7-in. door-piece, 2 6-in. ditto, 1 7-in. ditto, 1 10-in. ditto, 2 7-in. H-pieces, 1 10-in. ditto, 1 8-in. working, 1 7-in. working, 1 7-in. working barrel, 1 10-in. wood windbore, 1 10-in. stuffing-box and gland, 2 angle-bobs, 2 balance ditto, several pair of caps, 30 fms. of 1½ iron flat-rods, 1 pair of yokes, a quantity of staples and glands of various sizes, a large quantity of cast and wrought-iron, and a quantity of rod plates; also, several tons of tram-iron.

The auctioneer begs to solicit the attention of mine agents and others to the above materials, the same being of the best quality, and will be positively sold in one day.

Dated Bell Cottage, June 8, 1847.

LATEST CURRENT PRICES OF METALS.

LONDON, JUNE 11, 1847.

	£	s.	£	s.	d.
IRON—Bar *a*..Wales..*ton*	0	0—	8	10	0
,, ..London	9	10—	9	15	6
Nail rods ,,	0	0—	10	10	0
Hoop (Staf.) ,,	0	0—	11	15	0
Sheet ,,	0	0—	13	0	0
Bars ,,	0	0—	11	5	0
Welsh cold-blast foundry pig	4	10—	5	5	0
Scotch pig *b*, Clyde	3	3—	3	6	0
Rails, average	9	0—	9	5	0
Russian, CCND *c*	0	0—	—		
,, PSI	0	0—	—		
,, Gourieff	0	0—	—		
,, Archangel	0	0—	13	10	0
Swedish *d*, on the spot	0	0—	11	15	0
,, Steel, fagt.	0	0—	16	5	0
,, ,, kegs *e*	0	0—	15	0	0
COPPER—Tile *f*	0	0—	97	0	0
Tough cake	0	0—	98	0	0
Best selected	0	0	101	0	0

	£	s.	£	s.	d.
COPPER—Ordin. sheets, *lb.*	0	0—	0	0	11
,, bottoms	0	0—	0	0	12
YELLOW METAL SHEATHING	0	0—	0	0	9½
TIN—Com. blocks *g*..*cwt.*	4	10—	4	12	0
,, bars	0	0—	4	13	0
Refined	0	0—	4	15	0
Straits *h*	4	5—	4	6	0
Banca	0	0—	4	12	0
TIN-PLATES—Ch., IC *i*, box	1	8—	1	11	6
,, IX	1	14—	1	17	0
Coke, IC	1	5—	1	6	0
,, IX	1	11—	1	12	0
LEAD—Sheet *k* ..*ton*	0	0—	19	10	0
Pig, refined	0	0—	20	10	0
,, common	0	0—	18	15	0
,, Spanish, in bd.	17	10—	18	0	0
SPELTER—(Cake) *l* on spot	0	0—	20	0	0
,, ,, for arrival	0	0—	19	15	0
ZINC—(Sheet) *m* export.*	0	0—	27	0	0
QUICKSILVER *n* ..*lb.*	0	0—	0	4	6

IRON.—Welsh and Staffordshire are without alteration, the demand is very moderate for export. In Scotch pigs very little doing, but from their being no parcels pressing on the market the price is a little firmer.

COPPER continues in good demand.

TIN AND TIN-PLATES are languid.

LEAD is firm at quotations, and in request for home use.

SPELTER.—Several sales have been made this week at 20*l.*, and there are orders offering at a shade lower, but no takers.

COPPER ORES

Sampled May 26, and Sold at Andrew's Hotel, Redruth, June 10, 1847.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Carn Brea	108	£11 18 6	Wh. Tremayne	57	£4 11 0
ditto	106	5 5 6	ditto	44	10 18 0
ditto	94	5 18 0	ditto	36	2 0 6
ditto	92	9 0 6	Wh. Rodney	58	2 18 6
ditto	82	4 14 6	ditto	57	4 6 0
ditto	78	4 11 0	Trenow Consols	62	5 19 6
ditto	77	10 17 6	Wh. Agar	30	7 2 6
ditto	72	2 13 6	ditto	20	2 19 6
ditto	66	3 2 6	Wh. Jane	48	2 13 6
ditto	36	8 9 6	North Wh. Basset	44	3 2 0
ditto	32	0 17 6	West Wh. Treasury	43	3 5 0
Wh. Prosper	85	8 4 0	Wh. Virgin	34	5 1 0
ditto	77	4 0 6	ditto	8	2 13 0
ditto	65	4 6 6	Bastian's Ore	30	2 17 0
ditto	61	2 7 6	Redruth Consols	24	6 13 6
ditto	59	8 8 0	ditto	6	2 4 0
United Hills	74	3 12 6	Carn Perran	18	4 5 0
ditto	61	5 14 6	ditto	10	3 15 0
ditto	51	4 0 0	Wellington Mines	27	5 17 0
Wh. Sparrow	55	3 9 0	Michell's Ore	19	3 15 6
Par Consols	84	8 6 6	Harvey's Ore	6	2 14 6
ditto	78	5 4 6	Nth. Wh. Abraham	5	2 6 0
ditto	72	5 1 0	Wh. Prussia	3	3 19 6
			Pembroke	1	9 10 0

TOTAL PRODUCE.

Carn Brea	843	£5543 12 6	West Wh. Treasury	43	£139 15 0
Wh. Prosper	347	1928 10 6	Wh. Virgin	42	192 18 0
United Hills } Wh. Sparrow }	251	1045 14 6	Bastian's Ore	30	85 10 0
			Redruth Consols	30	173 8 0
Par Consols	234	1470 9 0	Carn Perran	28	114 0 0
Wh. Tremayne	137	811 17 0	Wellington Mines	27	157 19 0
Wh. Rodney	115	414 15 0	Michell's Ore	19	71 14 6
Trenow Consols	62	370 9 0	Harvey's Ore	6	16 7 0
Wh. Agar	50	264 5 0	North Wh. Abraham	5	11 10 0
Wh. Jane	48	128 8 0	Wh. Prussia	3	11 18 6
North Wh. Basset	44	136 8 0	Pembroke	1	9 10 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	163	£764 9 6
English Copper	347	1744 14 0
Vivian and Sons	464	2204 15 6
Freeman and Co.	316	1276 11 0
Grenfell and Sons	339	1722 6 0
Sims, Willyams, and Co.	196	1039 17 6
Williams, Foster, and Co.	540	4346 5 0
Total tons	2365	£13,098 18 6

Average Standard ....£105 4 0 | Average Produce 7½
Average Price per ton £5 10 6
Quantity of Ore .... 2365 tons. | Quantity of Fine Copper, 186 tons 6 cwts.
Amount of Money £13,098 18 6
LAST SALE.—Average Standard......£107 15 0.—Average Produce...... 7½

Copper ores for sale on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcels.—Devon Great Consols, Wheal Maria, Wheal Fanny, and Wheal Josiah 820—West Caradon 366—Fowey Consols 289—Wheal Friendship 244—Marke Valley 131—Bedford United Mines 118—Holmbush 73—Wheal Busy 55—Tamar Slag 12.—Total, 2110 tons.

Copper ores for sale on Thursday week, at Farquharson's Hotel, Truro.—Mines and Parcels.—United Mines 1279—South Caradon 359—Par Consols 315—Tresavean 265—Treleigh Consols 246—West Wheal Jewel 177—West Trethellan 82—Charlestown United Mines 55—S. Tolgus 37—E. Relistian 26—N. Downs 13—E. Downs 11.—Total, 2865 tons.

COPPER ORES.

Sampled May 20, and Sold at Swansea, June 10, 1847.

Mines.	Tons.	Prod.	Stand.	Price.	Mines.	Tons.	Prod.	Stand.	Price.
Cobre	137	13	95½	£10 2 6	Burra Burra	46	22	89½	£17 9 0
ditto	106	13½	95½	10 5 0	ditto	45	21½	90	17 0 0
ditto	100	13½	94½	10 5 0	Copiapo	89	28	88	22 8 6
ditto	98	13½	95	10 4 6	ditto	80	28	86½	22 1 0
ditto	94	13½	94½	10 3 0	ditto	48	28	88	22 8 0
ditto	59	21½	89½	16 13 0	ditto	33	27	88½	21 15 0
Cuba	80	14½	91½	10 14 6	Berehaven	97	9½	102½	7 9 6
ditto	79	14½	91	10 12 0	Holyford	77	25½	88½	20 5 0
ditto	66	14½	92½	10 17 0	Llandudno	50	5½	116	4 5 6
ditto	43	20½	90½	16 7 0	ditto	25	9½	100	7 13 0
ditto	19	20½	88½	15 19 0	Ballymurtagh	69	4½	120½	3 3 6
Burra Burra	81	20½	91½	16 14 6	Burra Burra	23	31	88	25 1 0
ditto	56	21½	91½	17 10 6	ditto	10	24	88	18 17 0
ditto	54	21	91½	17 0 0					

TOTAL PRODUCE.

Cobre	564	£6133 7 6	Holyford	77	£1559 5 0
Cuba	287	3417 12 0	Llandudno	75	405 0 0
Burra Burra	282	4821 16 6	Ballymurtagh	69	219 1 6
Copiapo	250	5552 15 6	Burra Burra	33	764 13 0
Berehaven	97	725 1 6			

Total tons, 1734.—Total amount, £23,598 12s. 6d.

Copper ores for sale June 24.—Cobre 102, ditto 101, ditto 60, ditto 56, ditto 33.—Cronebane 81, ditto 54, ditto 52, ditto 49, ditto 47, ditto 35, ditto 31, ditto 18.—Burra Burra 82, ditto 70, ditto 60, ditto 45, ditto 33, ditto 30, ditto 75, ditto 72, ditto 64, ditto 58, ditto 44, ditto 4.—Cuba 100, ditto 90, ditto 40, ditto 36.—Kanmantoo 74, ditto 73, ditto 35, ditto 1, ditto 34.—Berehaven 114, ditto 100.—Ballymurtagh 69, ditto 41.—Chili 68, ditto 29.—Tyn-y-Wern 11.—Total, 2266 tons.

BLACK TIN.

Sold at the Mine, on the 3d of June, 1847.

Mines.	Tons.	Price.	Purchasers.
Wheal Anderton	2	£44 5 0	Daubuz.
Sold, at the Mine, on the 10th of June, 1847.			
St. Agnes Consols	4	£47 15 0	Calenick Co.
ditto	4	47 15 0	Williams and Co.
ditto	6	44 17 6	Daubuz.
ditto	1	41 12 6	Williams and Co.

LEAD ORES

TICKETINGS FOR ABOUT 100 TONS (20 cwts.) NEWTONARDS LEAD ORE.

Douglas, Isle of Man, June 7, 1847.

Buyers.	Offer per Ton.
Dr. Somers—Bristol	£8 17 6
Messrs. Walker, Parker, and Co.—Chester	8 16 0
Tamar Smelting Company—Fowey	8 10 6
J. T. Treffry, Esq.—Beeralston	8 0 0

ALLEGED IMPROPER WORKING OF WELSH COLLIERIES.

VICE-CHANCELLOR'S COURT, JUNE 7.

THE DUKE OF BEAUFORT v. MORRIS.—The bill in this cause was filed in January, 1846, and an injunction was then applied for to restrain the defendants, Sir John Morris and George Byng Morris, from digging and working their coal mines under the River Tawey, in the county of Glamorgan, and from keeping open or using the then existing passages and communications through and under the soil and ground of the River Tawey, and from conveying coal through the same from the eastern or Kilvey side of the river, and from working the drift or communication from the Pentre Colliery to the Cal-Grobos Colliery, and from making any new or other adits, ways, passages, or communications between the defendants' collieries and the Landore Colliery, and from doing any acts, and from digging the defendants' coal mines in any places, which might injure or endanger the plaintiff's mines. The Vice-Chancellor of England, after hearing the motion, granted the injunction, simply restraining the defendants from doing any acts, and from digging and working their coal mines in any places which might injure or endanger the plaintiff's mines. The defendants appealed to the Lord Chancellor, but the decision was affirmed by Lord Lyndhurst. The case was now brought to a hearing in the usual way, the parties having gone into evidence. It appeared that the duke, as tenant for life, and the Marquis of Northampton, as tenant in tail, are the owners of the seigniory of Gower and the manor of Kilvey, in Glamorganshire. One of the coal mines in this district, belonging to the duke, is called the Landore Mine, and there is a neighbouring mine, called the Pentre mine, the property of the defendant, Mr. George Byng Morris. Near the Pentre Mine is another mine, belonging to the same proprietor, called the Cal-Grobos Mine. On the other side of the River Tawey are the Llyanewydd Collieries, which also belong to Mr. Morris. These mines or veins of coal lie in the form of a basin, of which the Landore pit is the lowest part, and that pit was represented as having been for many years in the possession of the defendant, as lessee of the duke. During the existence of this possession the water, for the convenience of the other mines, was allowed to flow into the Landore pit, whence it was pumped up by the engine in that pit. Sir John Morris and Mr. Morris ceased to be the lessees of the duke in 1845, and had since proceeded with and extended their workings on the other side of the Tawey, the water continuing to flow into the Landore pit as before; and it was alleged, that these new workings threw upon the duke's engine, in the Landore pit, the labour of raising an additional quantity of water carried to that basin by means of the old communications which had formed while the parties possessed a joint interest.

Mr. W. M. JAMES and Mr. DUMERGUE for the plaintiff, contended that the evidence had proved the case which had been brought before the court upon affidavits, and that the injunction ought now be made perpetual.

Mr. WALPOLE and Mr. RASCH, for Mr. G. B. Morris, submitted that the evidence did not prove that any injury was to be apprehended from the working of the mines which the plaintiff sought to restrain; that the plaintiff had not proved there were, in fact, any communications between the mines—or if there were any communications, that those had been wrongfully made, or that it was the duty of the defendants rather than of the plaintiff to close them up. They contended, that there was nothing in fact or in law which prevented the defendant, Mr. Morris, from working his own mines in such a manner as might be most profitable to himself. If the plaintiff's mines were not sufficiently protected from the flow of water, it was the business of the plaintiff to take other or better precautions to drain them. But it in fact appeared, that the plaintiff's Landore Mine was worked out and entirely drowned, and had been drowned for a long period; and that, even supposing some water had flowed in the direction complained of, it was not a matter that could be considered as an irremediable injury, and proper for the interference of this court.—Mr. TOLLER, for Sir J. Morris said, that he had now no interest in the mines—all the interest having been transferred to Mr. Morris before the bill was filed; and he submitted that he ought to be dismissed with costs.

Mr. W. M. JAMES, in reply, relied chiefly upon the fact, that the injunction had been granted upon the circumstances as they appeared to the Vice-Chancellor, which judgment had been confirmed by Lord Lyndhurst, and that the same circumstances now appeared in evidence. The injunction was, in fact, substantially in the same form as an injunction which had been granted by Lord Eldon in 1805, at the suit of the late Duke of Beaufort and the present defendants, against a party named Smith, who was then attempting to do what the defendants alleged they had a right to do.

His HONOUR reserved judgment, observing that the rule adopted by Lord Cottenham was not to grant an injunction founded on a legal right without a trial of that right at law. He suggested whether the proper course would not be to retain the bill, giving the plaintiff liberty to bring such action as he might be advised, subject to the imposition of certain terms as to admissions of fact to be made at the trial?

Mr. JAMES said, that the plaintiff would prefer an issue directed by this court, as the injury apprehended was that which would result from the extended workings rather than from what had now been done.

MINING SHARES.

COUNTY COURT OF WESTMINSTER—JUNE 7.

WILLIAM TRENERY, JUN., v. PAUL RABEY, JUN.—This was a case in which the plaintiff sought to recover the sum of 11*l.* 10s., being a balance of debt and costs of an action, which plaintiff had brought against defendant, on an I. O. U., for a share in Wheal Comfort Mine. The plaintiff's attorney stated, that the original debt and costs amounted to 26*l.* 10s.; that Rabey had paid 16*l.* on account; and that on the 21st Oct., 1846, the plaintiff had, at the request of the defendant, gone to the latter's counting-house in Great Winchester-street, for the purpose of receiving the balance; that defendant requested the plaintiff to sign a discharge for such balance, which the plaintiff accordingly did; that defendant placed such discharge in his pocket, and told plaintiff that he would write him a cheque for the amount, but he immediately afterwards said, "I suppose the cash will do as well;" that defendant then went towards his desk, and produced a bank note, saying, "that settles our accounts;" upon plaintiff opening the said note, and finding it to be only for 5*l.*, instead of 11*l.*, the defendant, who insisted that the plaintiff had agreed to settle for the 5*l.*, and hence would not give back the receipt.

John Webb (an ex-policeman) stated, that he was present at the transaction—did not hear any arrangements made between plaintiff and defendant; plaintiff held out a note to him, telling him to take notice that it was only a 5*l.* note.

The JUDGE, after hearing the defendant, at once stopped the case, and directed him to pay the full balance within a week, together with the costs of the Court.

Plaintiff's attorney stated, that there were witnesses present, who could prove, most completely, from the defendant's own admission, the plaintiff's case.

IMPORTANT MINING CASE.

COURT OF COMMON PLEAS—JUNE 11.

RICKETTS AND OTHERS v. BENNETT AND ANOTHER.—In this case Mr. Crowder, Q.C., Mr. Sergeant Channell, and Mr. Smirke, appeared in support of the rule *nisi* which had been obtained; and Mr. Butt, Q.C., Mr. Sergeant Kinglake, and Mr. Merivale, against it. The rule *nisi* had been granted on the grounds of misdirection upon the part of the learned judge who presided at the trial at Nisi Prius, and a verdict against evidence. Originally the action had been brought by the plaintiffs, being bankers, for the balance of a banking account, against the defendants, as two adventurers in a mine in Cornwall.

At the trial, Mr. Baron Platt had decided that, in point of law, the fact of these gentlemen being co-adventurers in working a mine did not of itself authorise the borrowing of money for the purposes of the mine; and his lordship left it to the jury to say, if, under the circumstance of the case, in reference to the management of the mine, and the defendant's conduct in respect of it, any express or implied authority had been given to a brother co-adventurer to borrow money. This was negatived by the verdict of the jury, which passed for the defendants. The facts were simply these. The money had been borrowed by a Mr. Robinson, one of the co-adventurers; and he had had, and still continued to have, the sole management of the mine. The mine was worked in accordance with the usual way pursued in Cornwall; and there was no evidence to show that the defendants knew anything whatsoever about the banking account, or were aware that the borrowing of money for the mining purposes of the enterprise was in consonance with mode of doing business in mining concerns. So that the material question raised was, whether the learned judge's ruling at Nisi Prius was or was not correct.

The CHIEF JUSTICE delivered the judgment of the court. They were of opinion, that there was no ground for saying that the mere fact of a man's being a co-adventurer in a mining speculation, authorised another to pledge his credit for money borrowed. This was distinguishable from other trading concerns in such respect; and, therefore, the court were satisfied that the learned judge's ruling was correct. And then, as to the other point, touching the verdict being against evidence, the court had looked carefully through all the evidence, and could not see how the jury could have been warranted in coming to any other conclusion than they did.—Rule discharged.

ACCIDENTS.

Balles sidden Mine.—G. Borlase was sadly injured by a fall of earth.

Wheal Roberts.—As two miners were, contrary to the rules of the mine, tamping powder with the iron tamper, the charge suddenly exploded, greatly injuring the hands, eyes, and faces of both—so much so, that the loss of their sight is apprehended.

Explosion in Croft Pit, near Whitehaven—Four Lives Lost.—On Friday last, one of those fatal and melancholy accidents which seem to be inseparable from the working of mines (more owing, we are convinced, to the imprudence of the miners in the mode of using their lamps, than to any defect in the construction of that blessing which the inventive genius of Sir Humphrey Davy has conferred upon that industrious and laborious portion of mankind) occurred at Croft Pit, by which four lives were sacrificed.

North Moor, Oldham.—J. Holden has died of injuries received at the colliery of Messrs. Evans, Barker, and Co., Robin Hill.

West Bromwich.—T. Wright was killed by a fall of coal at Messrs. P. Williams and Co.'s, Old Birches Field Colliery.

The Explosion at Gerard's Bridge Colliery, St. Helens.—We gave an account of this explosion in last week's *Mining Journal*, when the number of lives lost was not accurately known; it now appears that four men and four boys were killed—suffocated, it is supposed, from the after damp. No fire-damp had been before known in the pit, which was well ventilated; still the men had safety lamps provide them, which, however, they would not use, preferring candles—hence the accident.

Charnock Richard, near Preston.—A sad and fatal accident occured at Mr. Darlington's collieries by the fall of a portion of the roof on Saturday week. Eight men were at work at a draught, about five yards in width, when they proceeded to remove the pillar without the necessary propping, although plenty of timber was supplied, when a piece of the roof (grey sandstone), weighing 7 or 8 tons, fell, and killed four, the others escaping more or less hurt.

Bromley-lane, Brockmoor.—T. Harper was killed by a fall of coal.

Chillington Colliery, Monmore Green, Wolverhampton.—As J. Owen was speaking to his brother, who worked the engine, the crank struck him on the head, and fractured his skull in several places; he was taken up dead.

Tividale.—T. Smith was killed by a fall of coal in a colliery here.

Lyttelton Hall Colliery, West Bromwich.—T. Tilford was killed by a fall of coal.

Pontypool—Bursting of a Boiler.—A dreadful accident happened at the Partnewynidd forge by the bursting of a boiler. The scene was really terrific; one large piece of iron passed through the roof of the forge, carrying everything before it, and fell close by the office door, and several stones and bricks dropped on the roof of the houses near; and the windows were all broken. There were altogether 15 persons scalded, and otherwise injured, 10 of whom are now under medical care. In such large works, where there are hundreds of men, women, and children employed, it is surprising how any of them escaped.

Marshay Colliery.—J. Moon, aged 11 years, fell out of the chain by which he was descending one of the pits, and was so much injured as to cause death.

West Bromwich.—R. Tilford was killed by a fall of roof at Messrs. Horton's.

MINING MEETINGS—CONTINUED.

WHEAL CARTHEW.—A meeting of shareholders was held at the offices, St. Michael's-alley, Cornhill, on Wednesday the 9th inst.—G. W. HARRISON, Esq., in the chair.—The accounts having been examined and passed, the captain's report read and adopted, it was resolved, that to carry on the operations of the mine, a call of 1*l.* per share be made.—The following report from Capt. W. Penrose was read to the meeting:—This morning (June 5) I was at Carthew Mine, and find we have driven the adit level about 45 fms.; the lode in the present end is about 1 ft. wide, composed of flookan, spar, and occasional spots of lead, with portions of copper ore, but do not find the lode to make that improvement I could wish; the strata of ground is a soft blue killas, and we are now driving for 20s. per fm., and I do think it still congenial for lead.

WHEAL TAVY.—A meeting of shareholders was held at the Central Hall, Plymouth, on Tuesday last—Capt. J. PAUL in the chair.—Capt. Martyn's report was considered favourable. It was stated that a considerable sum had been saved by purchasing some mining machinery at a sale, and that, to meet this, it would be necessary to have more funds. The shareholders, therefore, agreed to a further call of 10s. a share, which would not otherwise have been required—the balance in hand being 435*l.* The forfeiture of several shares was confirmed, and the purser's salary was advanced two guineas a month.

WHEAL TREHANE.—A general meeting of adventurers was held at the mine on Tuesday, the 1st inst.,—Mr. I. C. ISAAC in the chair,—when the accounts were examined and passed, showing cost and merchants' bills for five months, ending April 29, 1003*l.* 1s. 8d.; dividends, 256*l.*; lord's dues, 66*l.* 6s. 10d.; expense of grant of two additional fields to sett, 140*l.* 5s.=1465*l.* 11s. 6d.—By balance, 216*l.* 14s.; ores sold, 1857*l.* 3s. 11d.=2073*l.* 17s. 11d.; showing a balance in favour of the adventurers, 608*l.* 4s. 5d.—It was resolved, that a dividend of 20s. per share be declared, payable immediately; that Messrs. B. Sambells, P. Abraham, J. L. Jenkin, and J. Sargent, be a committee, to act with the purser and captain; and that the captain be provided with coals and candles, and that the rent of the house he now lives in be paid by the adventurers.—The following report from Capt. J. Bryant was read to the meeting:—The lode in the 35 fm. level north is 2 ft. wide, worth 5*l.* per fm. The lode in the 30 fm. level north is large, worth 6*l.* per fm.; the stopes in the back of this level are looking well; we holed a rise 17 fms. behind this end to the 20 fm. level on Friday last, where there is a good lode; this rise has caused a good ventilation all through the mine. The 20 fathom level north is driven within 10 fms. of the St. German's Fields, where the lode is large, and the ground opened will pay well for stoping. The new shaft is sunk 21 fms.; and if the foul air does not impede our sinking, I hope to hole it to the 30 fm. level in a fortnight. We sampled a parcel of gossan ore yesterday, which was raised from the back of the 20 fm. level, computed 46 tons, and we intend sampling on the 14th inst. 40 tons of best ore. Having, as I said in my report of the 11th ult., made an addition to this sett to two fields, which is likely to give us upwards of 80 fms. in length on the course of the lode more than we then had (the lode not underlaying so fast as I then expected), and having opened some considerable length of ground which will pay well for taking away, I think our prospects are much improved since our last general meeting.

WHEAL TREMAYNE.—A meeting of the adventurers was held, at the offices, George-yard, Lombard-street, on Tuesday, the 8th inst.—The statement of accounts submitted, showed the amount of copper ore sold, on the 8th April, realised 804*l.* 18s. 4d.; on the 24th, and during May, the black tin sold for 1823*l.* 14s. 3d.; arsenic, 70*l.*; silver-lead ore, 282*l.* 13s. 6d.; debts received, 5*l.* 3s. 6d.=2986*l.* 9s. 7d.; from which is to be deducted 63*l.* 5s. 5d., as 1-20th lords' dues on 1265*l.* 2s. 3d. The costs and merchants' bills for March were, 1304*l.* 8s. 9d.; for April, 1301*l.* 5s.=2605*l.* 13s. 9d.—showing profit on the two months as 317*l.* 10s. 5d. But, deduct from the total 1075*l.* 8s. 9d., due at last account, leaves present balance, 757*l.* 18s. 4d.—The accounts having been allowed and passed, it was resolved, that in future only one clerk be retained at the mine.—The following report, from Capts. J. Phillips and W. Blewett, was read to the meeting:—In the 70 fm. level, north of Hockin's shaft, on Wallis's lode, east of the flookan, the lode is split in several parts; the north part 1 ft. wide—orey throughout; the other parts producing good stones of copper ore; when these parts fall together, we expect a good lode, and we expect they will fall together very shortly. This level is driven 7 fms. east of the said flookan In the 70 fm. level, west of the flookan, the lode is 15 in. wide, producing stones of copper ore and tin, opening moderate tribute ground. This level is driven west of the flookan 7 fms. The 60 fm. level, east of Alexander's shaft, is driven 45 fms.; the lode is 20 in. wide, opening good tribute ground, that will work at 6s. in the 1*l.* In the winze, sinking under the 60 fm. level, west of Alexander's shaft, the lode is 3 ft. wide, worth 20*l.* per fm. for copper ore. In the winze, sinking under the 45, east of Alexander's shaft, the lode is 20 in. wide, worth 15*l.* per fm.; this winze is about 38 fms. east of Alexander's shaft, and 4 fms. west of the 60 fm. level; this is likely to be a very productive piece of ground. The 30 fm. level cross-cut, east of Alexander's shaft, is driven north 24 fms.—the ground favourable for driving. We expect to cut one of Carlosso lodes very shortly. The 53 fm. level, west of Blewett's shaft, is driven 33 fms.; the lode is 18 in. wide, worth 7*l* per fm. for tin. The 53 fm. level, west of Pollard's shaft, is driven 30 fms.; the lode is 9 in. wide—poor at present. The cross-cut in the 40 fm. level, north of Fox's shaft, is driven 34 fms., and we have intersected a branch 4 in. wide, with good stones of ore in it, and the ground much better for driving. We have commenced sinking the new shaft under the 30 fm. level, to get down to the 40 fm. level against the cross-cut comes in, to enable us to throw open the tin ground in this part of the mine as quickly as possible. The 30 fm. level, west of the new shaft, is still opening good tribute ground that will work at 6s. in the 1*l.* The pitches and levels at Allen's and Rowe's shafts are looking much the same as they have been for some time past. On the whole, we are much improved for copper ore since the last report. In the 40 fm. level, west of Blewett's shaft, on Wallis's lode, we are clearing up a bottom under the said level, where the rich silver-lead ore was raised. About this part of the mine we have a great deal of whole ground standing unproved. We expect to clear the bottom by Wednesday next. We have had several samples assayed for silver from different parts of the mine, of which some make a good produce, and we have several samples more to be assayed, of which we form a high opinion. We hope to be able to raise a good deal of this rich ore.

NOVEL AND UNPRECEDENTED MINING ACHIEVEMENT.

A short time since, Capt. Joseph Vivian, manager of Wheal Tryphena, during a conversation with some of the adventurers respecting the state and prospects of this very promising and profitable adventure, observed, that he would engage to go underground, and break with his own hands, without the slightest assistance from any other party, 100*l.* worth of tin in eight hours; and that, too, without being allowed, or receiving, either before or whilst at work, any advantage above what the common miner would be entitled to. Upon which Mr. S——, one of the adventurers present, said, in the event of Capt. Vivian's undertaking and accomplishing this laborious task, that he would engage to *wheel* away the ore to the plat, with the provision, also, that Mr. P——, another adventurer present, would promise to fill the kibbles, and send it to the surface; to this Mr. P—— readily and cheerfully assented. Immediately on this announcement, Mr. L——, being of the party, and also an adventurer, declared that he would undertake the office of *lander*, and would be ready to receive the ore at the surface, and carefully land, wheel away, and deposit the same into the slides. This declaration having met the approbation of all present, Capt. Vivian was requested to name the day, which he did; and on Wednesday week, the 2d inst., at half-past eight o'clock in the morning, Capt. Vivian commenced working, which he continued to do, with little intermission, till half-past four o'clock in the afternoon; at five o'clock the kibbles were sent down, and the other three adventurers commenced with their respective and allotted tasks—two underground, and one at the surface; and by eight o'clock the whole of the ore was drawn up, and deposited in the slides, which, on being weighed off, was found to be 8 tons 3 cwts. of tinstuff, and from 5 cwts. to 7 cwts. of copper ore—the former, on being fairly sampled and carefully assayed, was pronounced to be worth 161*l.* 9s. 5d., and the latter about 3*l.*; in addition to this, it should be understood that the piece of ground from which this tin, &c., was broken, was left in a much better state for working than when Capt. V. commenced operations on it—so that a first-rate workman might break from 200*l.* to 220*l.* worth in the same space of time.

VENTILATION OF MINES.—In the House of Commons, on Wednesday evening, Mr. T. Duncombe moved for, and obtained, leave to bring in a bill to provide for the better ventilation of mines and collieries, for the protection and preservation of the lives of persons employed in and about the same, and to make other provisions relating thereto.

RICH SILVER ORE.—A very splendid parcel of silver ore was this week received by a mercantile firm at Liverpool, from Valparaiso. Its value, by different assays, has been computed at the rate of from 1590*l.* to 1600*l.* for the ton of 21 cwts. The purchasers, by tender, were, we are informed, the silver ore smelting firm of Mullins and Co., Battersea, near London.

MINING NEWS OF SOUTH AUSTRALIA.—Mr. Collinson, who went out in the *Emma Sherratt*, has been elected to the secretaryship of the Mount Remarkable Mining Company, at a salary of 150*l.* per annum, for which there were nearly 20 applicants.—Mr. Chipman, who went out in the *Royal Archer*, has been elected to superintendent's office of the Burra Burra Mining Company, at a salary of 350*l.* per annum, in the room of Mr. S. Stocks, who resigned.—there were also upwards of 20 applicants for this appointment.—Mr. Rosch, who had just arrived from Cornwall, was engaged as underground superintendent of the Burra Burra Mines.

A French engineer, charged with the duty of inquiring into the nature and condition of the mines in the south-east of the empire of Morocco, has discovered in the province of Tetuan fossil bones of great interest. Amongst them is the entire skeleton of a lion of gigantic size. These remains have been forwarded to Paris.

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—

TO THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

Also, to avoid trouble, POST-OFFICE ORDERS should always be made payable to WILLIAM SALMON MANSELL, as acting for the proprietors.

DR. CLANNY'S LAMP.—We have received several letters in reference to the assertions of "Veritas," in last week's Journal. In common with our correspondents, we regret, deeply so, that the letter was so calculated to wound the feelings of our esteemed correspondent, Dr. Clanny, but its insertion we deemed an unavoidable duty, in the impartial conduct of the Journal—allowing, as we do, a full and free discussion on all subjects interesting to the miner. One writer ("An Englishman," Gateshead), thus concludes his letter:—"But why this dispute about lamps?—In this enlightened age *lamps ought to be discarded*, and a sufficient supply of air, to sweep off the gases as they are evolved, afforded to the miners who have to inhale it for many hours a day; it is nothing but misplaced destructive economy (if I may so term it) that requires the use of safety lamps. Sink more shafts—let the miners be considered rational creatures, and then dispense with the scientific instruments, safety lamps. Pray, how would the shopkeepers of London like to live all day in an inflammable atmosphere, to the approach of which a *naked light* would cause destruction; and, although their safety would be insured by a safety lamp, yet I have no doubt their existence would be curtailed 50 per cent."

WHEAL CURTIS.—On referring to the letter of Capt. Crase, and accompanying explanation, published in the Journal on the 29th May, we consider the insertion of the communications from "A Constant Reader" unnecessary.

MEXICAN AND SOUTH AMERICAN COMPANY.—We have no means of obtaining a report of the meeting, held on Wednesday last—the directors deeming it prudent to refuse admission to the press. If "Scrutiny" be a shareholder, he should have attended the meeting, and then urged the propriety of publicity being given to their proceedings. We shall have pleasure, at all times, in either sending a reporter, to give the proceedings in detail, or of publishing a copy of the directors' report, or an abstract thereof, if furnished us for that purpose—from the office.

VENTILATION—SAFETY LAMPS, &c.—We have been compelled to postpone the letters of Dr. Clanny, Mr. H. Johnson, Mr. G. Shepherd, C. E., and others; besides a mass of general information, for which we shall give a DOUBLE SHEET next week.

SILVER AND GOLD MINES OF THE NEW WORLD. We have in type the first part of the second series of these interesting papers, which shall appear in our next.

"W." (Leeds).—A full report of the interesting proceedings of the Institution of Mechanical Engineers, at Birmingham, appeared in the Journals of the 23d and 29th May.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all the news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, JUNE 12, 1847.

Our attention having been drawn by several correspondents to the progressive advancement making in the counties of Cornwall and Devon, more especially those mines which may be said to be in virgin ground; while several worked for a lengthened period, are again coming forward with increased produce, and aided by the improvement in the standard are paying handsome dividends, in which we may include Carn Brea and others, we are induced to refer to some tabular statements, which appeared in our columns a few months since, as affording evidence of the profitable results of the past year, confining ourselves to 10 mines. The following will, we believe, be found a correct list, showing the amount paid, the dividends in the 12 months, with the relative number of shares, calls paid, market value, &c.:—

Name of Mine.	*Sh.*	*Calls.*	*Paid.*	*Price.*	*Value.*	*Div.*	*Total div.*
Devon Gt. Con. (Maria)	1024	£1	£1024	£500	£512,000	£37	£37,888
East Wh. Rose	128	50	6400	1300	166,400	240	30,720
Carn Brea	1000	15	15000	100	100,000	19	19,000
West Caradon	256	20	5120	170	43,540	32½	8,320
South Caradon	128	10	1280	400	51,200	50	6,400
North Roskear	70	10	700	300	21,000	65	4,550
East Wheal Crofty	94	10	940	300	28,200	42½	3,995
Trelawney	260	7½	1950	125	32,500	12	3,120
Trethellan	120	5	600	30	3,600	20	2,400
Treavean	96	10	960	280	26,880	18	1,728
			£33,974		£985,320		£111,121

It will thus be seen, that 10 mines alone, with the comparatively small outlay of 33,974*l.*, yielded a sum of no less than 111,121*l.* in dividends, exclusive of the outlay in the shape of machinery; while the entire amount expended on the floors, erection of engines, crushers, stamps, flat-rods, pumps, &c., may be set down at full 300,000*l.*—thus giving an actual value of machinery, buildings, &c., of nearly 10 times the amount invested. It is also to be remembered, that in these figures no account is taken of the value to be attached to the mines: while the market price of the shares into which they are divided, adhering to the figures quoted in the article referred to, will be found to be 985,320*l.*, on an outlay of 33,974*l.*, or 30 times the amount, at once affording evidence of the importance and value to be attached to investment in mines where judgment and economy is observed.

We need hardly say that our Share List, which from week to week varies in its quotations, and which, we regret to say, with all the care manifested, cannot at all times be confidently relied upon in some particular instances, arising from causes not under our control, might make some slight alteration. We have, therefore, thought it right to confine ourselves to the figures before advanced, instead of the prices at present quoted, although in East Wheal Rose we have an advance of 12,800*l.*, in Carn Brea, 10,000*l.*, and in North Roskear, 7000*l.*—thus making an increased value in those three mines of 29,800*l.*; the other mines nearly approximating to the prices quoted, with the exception of Wheal Maria, but, as we believe no transactions have taken place in the way of transfer, any alteration must be considered nominal; while we may remark, that within no distant period, shares in this mine sold at the rate of 750,000*l.* for the mine, the amount of dividends paid, and outlay in plant, &c., being full one-third that amount within the brief period of three years. In referring to these mines we have confined ourselves to a few, as sufficient to answer our object; while to refer to a more detailed statement, which we prepared at the time, it will be seen that, in the counties of Devon and Cornwall, the dividends paid on 28 mines in the past year amounted to the large sum of 158,838*l.*—the entire capital paid up not exceeding 190,000*l.*; while their market value, according to our Share List of the day, was 1,350,000*l.*—thus showing that the interest paid was upwards of 80 per cent. on the capital invested, and about 11 per cent. on the market value, the 10 mines specified having yielded 375 per cent. on the paid-up capital.

We may here remark on the mines which have been abandoned—if we may use the expression—arising from circumstances various in themselves; in some instances, the want of efficient machinery, the change of ground, &c., which, as reported in a former Number, 18 of which had yielded full 3,000,000*l.* sterling profit. We must, however, content ourselves with figures on the present occasion—while we may revert to the subject in an early Number. We may say, *en passant*, that as our object is the acquirement of information, and rendering such to our readers, our mining statistical friends will oblige us by aiding us, either by addition to, or correction of, our list.

It is with much regret we notice the present position of the United Hills Mine: after so many years of patience and perseverance on the part of the directors and shareholders, and just as they were in a position to make returns which would have, doubtless, more than paid the current cost, they find themselves overwhelmed with a deluge of water from the abandonment of an adjoining mine, and the works in their most productive levels put a stop to. That these mines are really valuable property, and will eventually pay for the capital expended, is the general opinion of the most experienced mining agents, who are acquainted with this part of the county; and we sincerely hope that the shareholders will not be discouraged by the present totally unforeseen accident, as we feel assured that the exertions of the directors and agents will be directed to the utmost of their ability to repair the damage; and we have but little doubt that their efforts will be crowned with success.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

The newspapers state, that the Committee on the Customs Bill has come to a resolution to recommend the imposition of a heavy tax on English copper, in order to benefit the merchant navy, by imposing on France the necessity of going to seek copper ore in South America, and bringing it to France to be manufactured. I heard something of this notable project 10 days ago, but it seemed to me so very absurd, that I refrained from inquiring anything about it. As, however, the *Constitutionnel* has published it, I suppose it must be true—for the *Constitutionnel* is the organ of M. Thiers, and M. Thiers is the leading man on the committee. Tax English copper, to give an opportunity to the merchant shipping of bringing ore from South America—why what a sublime invention that is! I have a great respect for the intellect of M. Thiers, but really such a proposition is more like the emanation of a disordered mind of Bedlam, than of that of a great statesman. If English copper is to be excluded from France to benefit the merchant navy, why does not M. Thiers also propose that English coal from Newcastle shall be sent to the North Pole before it be allowed to be delivered in France? Why not propose that American cotton shall be brought to France *vid* Canton and the Cape? and that Belgian cast-iron shall make a trip round the British Isles, before being delivered at Calais? It is as much to the interest of the merchant navy to carry cotton and cast-iron to Canton, as it is to fetch copper ore from South America; and there is really just as much reason why these unfortunate French people should be saddled with the expense of the one as of the other. But, in truth, the scheme is so utterly extravagant, that I cannot believe it will ever be adopted by the Chamber of Deputies. The presentation of a bill for cutting down the iron monopoly, in favour of the shipping interest, afforded so much satisfaction to the Chamber and the public, that it is impossible not to believe that they will scout with scorn and contempt the project for creating an unreasonable and mischievous monopoly, in favour of the shipping interest. It must be so—it cannot be otherwise; the new "dodge" of the ironmasters for humbugging the shipping interest, the Parliament, and the public, and protecting their own pockets, will meet the fate it merits. But the ironmasters are not the only people interested in this notable project. The little clique of the proprietors of the few paltry smelting establishments which France possesses would also be delighted to see it carried into effect, for it would put immense profits in their purses. They are already moving heaven and earth to prevent the proposed abolition of the duty on copper imported for shipbuilding; and if they could succeed not only in doing that, but in excluding English copper altogether, their joy would naturally be intense. But in order that their design may be knocked on the head at once, the Free Traders in France have only to demonstrate what is really the truth, that France can never, do what she will, smelt copper on an extensive scale; that at this very moment she has not got 200 people altogether—workmen, managers, proprietors, all—engaged in the smelting business; that it is impossible she can ever obtain from America ores as cheap as England does; and that, consequently, the proposed measure would add so enormously to the present enormous price of copper, as to render it almost impossible to purchase—would impose an immensely heavy tax on the whole nation—and create another most hateful monopoly.

No decision has yet been come to with respect to the case of General Cubières, accused of having bribed a Minister with shares of the Gouhenan Mines, or of having fraudulently obtained the shares under pretence of so doing. Some of the shareholders have written to one of the newspapers to state that the shares in question were subsequently restored to the company.

Reports are current of very strange transactions having taken place with respect to the concession of certain mines in Algeria.

A petition, very numerously signed, has been presented to the Chamber of Deputies, praying for the reduction of the duties on foreign iron, and especially on rails. This may be considered an event of considerable importance, as petitions to Parliament are by no means so common in this country as in England.

On 1st July next, the Marine Department will receive contracts at Paris for the supply of 10,000,000 kilogrammes of *English* coal for Algeria, and 3,000,000 kilogrammes of *English* coal for Tahiti, &c. On the 3d July, it will receive contracts for large quantities of iron; and on the 1st it will receive contracts for large quantities of *French* coal.

A bill for the establishment of another School for Miners has passed the Chamber of Deputies. The French Government incurs great expense in maintaining institutions for teaching the theoretical and practical knowledge necessary to those who devote themselves to the mining profession. In point of fact, the scientific knowledge of mining matters that may be gained in this country is superior to what can be obtained in England.

The usual weekly letter from St. Dizier, of the 3d, says:—"Iron is not quoted, on account of the stagnation of affairs; still some little sales of *fer battu* have been effected at 385 fr. for the provinces; *fontes blanches* may easily be obtained at 180 fr., although there are very few to sell."

The Dutch have just discovered three valuable coal mines at Batavia.

The Municipal Council of Valence, in imitation of that of St. Etienne, has just adopted a series of resolutions against the Great Coal Company of the Loire being allowed to hold in its hands so many concessions. The city of Valence alone consumes 200,000 hectolitres of coal per annum, and 60 boats arrive annually on a neighbouring canal, each carrying a cargo of 2500 metrical quintals, destined for the neighbouring country. All this coal is drawn from the basin of the Loire.—*Paris, Wednesday.*

BELGIUM.—Some modifications have been made in the bye-laws of the Nouvelle Montagne Company, and sanctioned by Royal ordinance. The most important—there are to be seven directors and a managing director, the former of whom are to receive $\frac{1}{20}$th parts of the profits, subject to the reserve at present existing, and to a fixed annual salary and travelling expenses, in the event of the profits not allowing the $\frac{1}{20}$ths to be abstracted; the directors who cannot attend may nominate a director to represent them; the managing director to have a salary when his share of the profits are not large enough to pay him a fair salary; and the annual general assembly to take place in April. At the meeting at which these modifications were agreed to, the shareholders passed a vote, authorising the directors to borrow 40,000*l.* or less, for extending the operations of the company.

At the meeting of the Grande Montagne Company, held some time back, the report stated, that the existence of large quantities of calamine and lead of excellent quality had been ascertained in the different shafts; but the zinc furnaces will be established at Mallieure, and will be 40 in number, manufacturing 3000 tons of zinc; that they will be on the Silesian, and not the Belgian system; that they will use up the small coal, leaving the larger for sale to the public; that the lead furnaces (20 in number) will be capable of turning out 1500 to 2000 tons of metal per annum; that up to 31st Dec., 1846, the funds were employed as follow:—For works in the zinc, lead, and iron mines, 129,291 fr. 43 c.; in the coal-pits, 63,316 fr. 1c.; constructions for working, 29,383 fr. 75 c.; ditto for furnaces, 6289 fr. 65 c.; *materiel*, 18,542 fr. 94 c.

At the meeting of the Company of the Mines and Furnaces of Stolberg, the dividend of 1st July next was fixed at 1*l.* per share, which the interest paid on 1st Jan., makes 9 per cent. on the shares. The extraction of lead was not in full operation, but in one day ore of the value of 100*l.* had been obtained.—*Brussels, Tuesday.*

RAILWAY PROFITS.—The principal railway companies in the United Kingdom having lines completed and at work, are 28 in number; the length of their lines in operation is 2418$\frac{3}{4}$ miles and the total cost to the dates of the last balance sheets is 77,162,952*l.* The dividends now paid upon the different items of which this capital is made up, vary from 2 to 10 per cent. in the following proportions:—

On £1,079,867 the dividend is	£3	0	per cent.
On 853,918	2	8	"
On 520,341	2	12	"
On 142,900	3	6	"
On 4,741,349	3	10	"
On 1,174,969	4	0	"
On 5,705,867	5	0	"
On 1,085,498	5	10	"
On 2,003,127	6	0	"
On 26,376,102	7	0	"
On 8,426,000	8	0	"
On 2,062,053	9	0	"
On 23,089,971	10	0	"
£77,162,952			

The total dividend upon the various items above enumerated amounts to 5,746,068*l.* per annum, being an average of 7$\frac{1}{2}$ per cent., within a fraction, on the entire sum invested by the shareholders in these undertakings. It should be borne in mind, too, that the resources of many of these companies are as yet but imperfectly developed. In some cases the lines are but partially opened, and in others, such as the Great Western, though the main lines are complete, many of the tributaries essential to the full development of the system of which they form part, and from which much increased wealth and prosperity must necessarily flow, are as yet incomplete, and have brought nothing to the general fund.—*Birmingham Advertiser.*

GUN-COTTON EXPERIMENTS.

We have, in former Numbers of the *Mining Journal*, given the details of various experiments with gun-cotton in blasting (authentic particulars of which we have been favoured with by the patentees, Messrs. John Hall and Co., of Lombard-street) at the Holyhead Mountain, Anglesea, the Holland Slate Quarry, Festiniog, the Penrhyn Slate Quarries, Flaybrick Quarry, Birkenhead, and the Woodhead Tunnel, near Manchester—in all of which cases its superiority over gunpowder has been fully proved. On Tuesday, the 1st inst., a number of gentlemen and agents connected with the great iron-works of South Wales, attended to witness some further experiments at the Ebbw Vale and Tredegar Iron-Works; amongst those present were—Samuel Homfray, Esq., of Tredegar Iron-Works; Thomas Brown, Esq., Ebbw Vale; Henry Bailey, Esq., Nantyglo and Beaufort; T. L. Brewer, Esq., Coalbrook Vale; F. Levick, Esq., Cwmcelyn and Blaina; James Beaumont, Esq., Victoria; Jas. Brown, Esq., secretary to the iron trade of South Wales; Richard Fothergill, Esq., of Tredegar; Mr. Theophilus Jones, mineral agent to Tredegar Iron Company; Mr. John Adams, mineral agent to Victoria Iron Company; Mr. William Adams, mineral agent to Ebbw Vale Iron Company; Mr. Wm. Needham, mineral agent to Beaufort Iron Company; Mr. Alfred Jones, mineral agent to Tredegar Iron Company; the Rev. L. Charles Lewis; A. Homfray, Esq., surgeon; N. Coates, Esq., ditto; —Webb, Esq., ditto; together with Messrs. Ellis, Hunter, Ion, Jones, R. Roden, Lloyd, &c.; and the contractors at the quarries of the Rhymney, Sirhowy, Tredegar, Beaufort, Ebbw Vale, and Victoria Iron-Works, with nearly 200 quarrymen, all of whom appeared to take the deepest interest in the proceedings.

The day was remarkably fine, and the experiments were continued from three o'clock until half-past eight, in every one of which the success of gun cotton was complete—the extraordinary manner in which large masses of rock were detached and rolled over the precipice, called forth the admiration of all present. In one part of the Tredegar Quarry the rock is so hard that gunpowder has but little effect on it; in the hardest of this portion of the rock a charge was placed, and the extraordinary execution which it effected astonished every one present.

Mr. Adams, who, with Mr. Needham and Mr. Wheeler, conducted the experiments, made notes of the details, and expressed his conviction, that the prepared cotton was fully six times the strength of gunpowder. Under ground the success is still more striking than in the open air. On Wednesday, the 2d, a series of experiments took place in the Ebbw Vale Ironstone Pit, and the results, in every instance, were most satisfactory; in every case the cotton accomplished the work of six times its weight of gunpowder; and what is of still more importance, without, in the slightest degree, vitiating the air. In this pit, from its situation, gunpowder smoke would remain in for three or four hours, interrupting the free respiration of the men; while with the cotton they can work on, without the slightest loss of time. On the first day, an accident happened by a premature explosion, occasioned by using an iron rammer. A gentleman from the neighbourhood, Mr. Wheeler, and G. Davies, the workman, who was ramming, were injured; Mr. W. was able, however, to resume the superintendence of the experiments next day, and the other two were going on well.

RAILWAY REGULATION BILL.

Much excitement exists in the railway world, in consequence of an obnoxious bill for the regulation of railway companies, which Mr. Strutt has brought before the House of Commons, being likely to be supported by the Government, and which, if suffered to pass, will inflict an irremediable injury on this description of property, and, most probably, create a panic in the country respecting railways, the effects of which will, probably, be felt for years. Already is it almost officially announced by numerous individuals of high commercial standing, and, as if a simultaneous understanding had been come to, that should the proceedings of boards of directors be interfered with, and the parties themselves subjected to examination in the manner contemplated by the bill, they will immediately resign their posts as directors, and cease all connection with English Railways.

We have before us a pamphlet from the pen of S. Laing, Esq. (late secretary of the railway department of the Board of Trade), on Mr. Strutt's *amended (?)* bill. The bill, as it now stands, comprises two objects—first, the regulation of preliminary proceedings upon future railway bills; and, secondly, the enactment of various stringent provisions, in the shape of supervision and regulation over existing railways, most seriously affecting the whole character of the railway system in this country, and the interests and vested rights of existing railway property—a question involving not merely the security of the enormous mass of property invested in railway enterprise; but what is of far more importance—in fact, in a great commercial country like this, of vital importance—whether private enterprise and property, embarked on the faith of Acts of Parliament and solemn compacts with the executive Government, reorganised and ratified by the Legislature, are to be held sacred from uncompensated interference, by *ex post facto* legislation. After drawing attention to the manner in which the railway system has been carried out in France, as compared with this country—in the former the Government not only advanced large sums of money, but found the land for the companies, while in England all has been accomplished by collected enterprise and private capital—he takes a review of the different legislative proceedings which have taken place with regard to railways, showing how fully, how jealously, the principle of the integrity of vested rights has been hitherto observed. The first general Act in regard to railways of 1838, the committee of 1839, 1840, and Mr. Gladstone's committee of 1844, all adhere to the principle—"that, however improvidently Parliament may, in the first instance, have granted to railway companies such extensive powers, it is now advisable to interfere with them as little as possible, and to limit their recommendations to a plan which may ensure the effectual administration of the laws by which each railway company is incorporated."

The following are some of the absurdities of Mr. Strutt's bill. It repeals the settled arrangement with regard to the mails, and substitutes one in which the arbitrators are only to award the *actual amount* of any additional expense which can be shown to have been incurred by the railway company in performing Post-office services, and 5 per cent. on that amount. The regulations as to returns by Mr. Gladstone's committee are to be repealed, and an absolute power provided of requiring railway companies to furnish, at their own expense, any and every description of return which the commissioners may think fit to call for, and to subject their minutes, accounts, and documents of every description, to the inspection of *any* officer appointed by the commissioners, who may summon before him, and examine upon oath, any director or person connected with the company upon any matter relating to the company's affairs. A provision that any person furnished with a pass by the commissioners, shall travel free upon their business. The scale of charge, as settled between the railway interest and Mr. Gladstone's committee, for the conveyance of troops, is to be reduced by a third. The commissioners, once in every year, to make a report to Parliament upon the subject of the tolls, fares, and charges which every railway company is entitled to demand; and of the tolls, &c., actually levied by any company for the time being, with any necessary observations. No company to alter their charge, and, strange as it may appear, not even to *lower* them, under heavy penalties, without giving 30 days' notice, accompanied by a statement of their reasons. Assuming that they do not take sufficient pains to ensure punctuality in the running of the trains, the following is the extraordinary remedy proposed:—That at any station the commissioners may require, companies shall appoint and employ an officer, to keep a register of the appointed and actual times of arrival and departure of all trains—copies of which are to be every week suspended for public inspection, and forwarded to the railway commissioners, who are to report annually to Parliament on the general regularity or irregularity of the trains of the several railway companies. This is really a laughable proposal; and, with some of the other clauses, would induce the conviction, that Mr. Strutt, in his ambition to become a railway legislator, has blundered on a vast heap of cumbrous machinery—of the difficulty of working which, he has not the most remote idea. We have now, or soon shall have (say) 2000 stations, which, with 20 trains a day, would make 40,000 separate entries per day, or 280,000 per week, to be returned to the unhappy commissioners, who would soon be absolutely buried under these useless returns—useless, we say—for is it not certain that, for their own interest, directors of railways will use their utmost efforts to ensure regularity, and thus induce the public to travel on their lines with confidence?

There are various other ridiculous instances in the bill of officious intermeddling, and Mr. Laing most justly observes:—"Never interfere, by Act of Parliament, with other people's business, unless in a case of clear, unmistakeable, and overwhelming public necessity: the worst of all systems is to be perpetually meddling for meddling sake; and if one year you make an Act of Parliament to create a commission, because you have a vague idea that *something* ought to be done, and do not very well know what—and the next year bring in another Act, because, having created a commission, you do not know what to do with it—you may depend upon it you are departing altogether from the principles which ought to actuate commercial legislation. A proper system of supervision over railways is highly desirable, and its success ought not to be jeopardised by this sort of hap-hazard legislation—reversing, with the intrepidity of ignorance, all that has been most fully determined by such men as Lord Dalhousie, Mr. Gladstone, and Mr. Labouchere; and, by careful and deliberate inquiry of select committees, composed of the most distinguished Members of the House of Commons." It must be clear to every man of common sense, that Mr. Strutt's bill is a gross absurdity; and we trust that even should the Government, by some strange attachment to its provisions, give it their support, there is still sufficient intellect and independence among our representatives, to prove to such meddlers, as the author of the bill in question (pity they have nothing better to employ their time), that great national interests are not to be tampered with—with impunity, nor well-considered legislative enactments to be swept away by the frivolous pretensions of would-be law-makers.

His Imperial Highness the Grand Duke Constantine of Russia, attended by a numerous party of distinguished and scientific gentlemen, visited Messrs. Ditchburn and Mare's shipbuilding establishment at Blackwall, on Wednesday last, for the purpose of seeing the different processes employed in building iron and wood ships. His Highness first inspected the various plans and models of the several vessels on the stocks, 11 in number, from a cutter yacht of 12 tons, to a steam-screw frigate of 1800 tons, giving particular attention, and seeking every information with reference to the plans and model of a fine steam-frigate of 1200 tons, designed by Mr. Ditchburn, and just commenced building for the Russian navy. His Highness then proceeded to the slip where she was being laid down, the main stem of which was suspended in the tackles, ready to be lowered into its place. Here a novel ceremony occurred—it being the common custom in Russia of naming every ship built for the Government. A brass plate, handsomely engraved, bearing the following inscription, in the Russian language, was handed by Mr. Ditchburn to his Highness:—"*Vladimere*, steam-frigate, commanded by his Imperial Highness Grand Duke Constantine, designed and built by Messrs. Ditchburn and Mare, Blackwall, London, 28th May [old style, which Russia still retains], 1847." This plate his Highness placed on the scarph, or junction, of the stem and keel, in a recess made to receive it; the stem was then lowered into its place, and a bolt of 1$\frac{1}{2}$ in. diameter was very smartly driven by his Highness, securing the stem to the keel; the builder, Mr. Ditchburn, next gave several blows on the same bolt—then followed in succession Admiral Litcko, Count Geydin, Baron Friderick, Capt. Korneloff, and others. Best wishes were then expressed for the success, safety, and durability of the good ship *Vladimere*, by his Highness and party, who then went on board the *Vulcan*, steam-screw frigate, of 1800 tons, also building by Ditchburn and Mare, for the British Government. The superior form and magnitude of this ship elicited great praise and surprise. The Grand Duke next witnessed the process of forming the iron ribs as they were drawn from the furnace red-hot, and appeared much interested at the facility with which they were wrought into the most difficult curvitures and forms; in short, he beheld with much curiosity and intelligence all that was to be seen in this extensive and interesting establishment; after which, the noble and distinguished party repaired to the Brunswick Hotel, Blackwall, where they were entertained in a highly-gratifying manner.

RAILWAY WATER COMPANIES.—In some of the railway bills of the session, power is supposed to be taken to enable these corporations to act as water companies for the supply of water by pipes along the railways, to the towns and places on and at their termini. The Commissioners, in their reports, have drawn attention to the subject, in connection with the bills of the Manchester, Sheffield, and Lincolnshire Railway, who propose to take powers in connection with a similar proposal. The company state that it is their wish to sell the water in bulk to an existing water company, and not to undertake the duty of distributing the water, for which powers are proposed to be taken in their bill. Such powers (observe the Commissioners) appear totally foreign to the ordinary functions of a railway company, and it will be for the committee on the bill to determine whether any sufficient case is made out by the company for the adoption of so unusual a course. In reporting on the pecuniary position of the Leeds and Thirsk, the Commissioners state, by each of the above-mentioned bills, it is proposed to be enacted that the capital shall be raised "on such terms as may be agreed upon;" and, it is stated by the company, that it is intended under these words to issue perpetual shares, with a guaranteed dividend of 6 per cent. They add, that they have taken this course because they found it impracticable to raise the capital at par without such a guarantee, and that they have considered it more advisable to give such a guarantee than to obtain the capital at a discount. The commissioners must, in the first place, remark upon this proposal that, in their opinion, the intentions of the company ought to have been shown more clearly in their bills. They also consider it necessary to call the attention of the committees on the bills to the present financial conditions of this company. It appears that the company has at present raised capital only to the amount of 487,512*l.*, and that they still possess a power of raising, by shares and loans, a sum exceeding, by an undefined amount, 1,340,000*l.* Under these circumstances they apply to Parliament for powers to raise a sum which is undefined in amount, but which is likely to exceed 2,500,000*l.*; and to the new shares, amounting to three-fourths of this sum, they propose to guarantee a dividend of 6 per cent. This will produce shares to the amount of less than 500,000*l.*, which are at a discount; and with a large unexercised power of raising money, they propose to raise 2,500,000*l.* more, and to guarantee a dividend of 6 per cent. on nearly 2,000,000*l.* of that amount.

FALL OF A RAILWAY VIADUCT IN FRANCE.—A serious disaster has occurred on the new line of railway between Avignon and Marseilles, which was just ready to be opened. The viaduct, which carried the railway over the River Neurthe, one of the principal works of art upon the line, has fallen. The particulars of this event had not reached Paris, but it appears that no lives have been lost. The damage will amount to from 2,000,000 to 3,000,000 frs.

SHREWSBURY AND BIRMINGHAM RAILWAY.—We find that the works of this important line between Shiffnal and Wellington are making rapid and satisfactory progress, many hundred men being employed on this contract alone. At Shiffnal one of the largest embankments in the kingdom is being constructed, and in connection with it will be a viaduct stretching across the main street in the town. The foundations for this mass of brickwork and masonry are prepared, and great blocks of fine hard stone are constantly arriving to aid in its construction. At Oakengates (midway between Shiffnall and Wellington) a tunnel will have to be constructed under the Shropshire Canal, which we are told is to be diverted from its present course. All this necessarily implies some heavy, and considering it is in a mining district, perhaps troublesome work, but, in these days, engineering difficulties seem to be a dead letter, so we have no doubt that all will progress well.—*Worcestershire Chronicle.*

IMPROVEMENTS IN RAILWAY WAGGONS.—Some models of goods and cattle vans recently patented by Mr. Henson, the superintendent of the construction department of the London and North-Western Railway, were exhibited on Monday last. The primary objects of the patentee appear to be to afford security against fire, and to effect a saving in the wear and tear of goods waggons. The construction and working of the goods waggons and cattle trucks now in use are edifying instances of the very slow progress with which improvement marches, even in the management of the greatest commercial improvement of the age—viz., the railway system. While the skill and ingenuity of rival railway engineers have been taxed to the utmost in the production of powerful locomotives to deal with express and goods trains, the old mode of carriage construction has been permitted to prevail almost without interruption. Precisely the same precaution that was previously taken to protect goods from the waters of the Heavens has been adopted to preserve them from the red hot cinders of the locomotive, and the consequence has been the destruction of a large amount of property by fire, and an enormous waste of steam power. As our readers are aware, the goods waggon is an oblong box without a lid, or rather it is in effect the old covered vehicle deprived of its broad wheels, and thrust upon a frame fitted for the railway, with a tarpaulin substituted for the wooden hood; and we take upon ourselves to assert that, if side winds—the great practical impediment to the speed of the locomotive—did not fortunately prevail 99 times out of 100—or, in other words, if the cinders of the engine were blown in a direct line with the train—not a day would pass without a serious fire to some one of the numerous goods trains travelling upon the railways of this country. But the loss by fire of merchandise conveyed by railway is frequently occurring. A few days since, on the very line to which Mr. Henson is attached, several goods waggons, with the whole of their contents, were burnt, literally to cinders; the loss amounting, it is stated, to about 2000*l.* But this is not the only loss sustained by the use of the existing goods waggons. We believe that the firm of Pickford and Co. expend many thousands annually, in replacing the tarpaulins of the railway waggons employed by them. In addition to these serious disadvantages is the loss of power in the atmospheric resistance produced by the use of the open cattle vans and the loose tarpaulins of the goods waggons. We have no means of estimating this loss, but we are satisfied that it increases the consumption of coke to a degree well worth consideration. The goods waggon with which Mr. Henson proposes to replace the present stock is of an extremely simple construction. It is merely an iron waggon (the sides lined with wood), covered with a carved iron roof, which is divided transversely in the centre, and moveable backwards or forwards, on anti-friction rollers, so that either half of the waggon is rendered easily accessible. The roof is perfectly water-tight; the whole waggon presents the least possible amount of atmospheric resistance, and its contents cannot possibly be set on fire through the cinders from the engine. With these advantages it is not more expensive than the present inconvenient waggon. The cattle-waggon offers the same protection against fire—for cattle are sometimes burnt to death in railway trucks—and the easy means of egress as well as ingress, and secure footholt, that are afforded, will prevent the infliction of much of that deterioration and inconvenience which cattle conveyed by railway now almost necessarily suffer. The wonder is, how so simple and obvious a remedy for the evils we have mentioned was not hit upon some 20 years ago.

SALT TRADE IN RUSSIA.—The produce from the monopoly of salt in the year 1842 fell off to the extent of 2500,000, as the duty per ton was reduced from 315 to 312. But the consumption has so increased, that in the course of the last three years the receipts have increased to the extent of 676,900 rix dols.

Original Correspondence.

THE COPPER ORE DUTIES.

SIR,—It is singular, that none of the published letters respecting the protecting duties on copper ores, contain any allusion to the duty on ores from a British colony. Although it be true, that this duty is only 1*l.* 1s. per ton on copper from colonial ore, whatever the per centage may be, yet I believe, that this duty is the wedge, that will, in a year or two, completely overturn the present system of protection on copper ores. It will be remembered, that in 1845 the shipments of copper ores from South Australia were only of the value of 17,179*l.*—whereas, last year they were probably quintupled—at least, ores of the value of 46,239*l.* were sold at Swansea within the year. Now, as mines of equal value to the celebrated Burra Burra have been found about twelve times nearer the coast, there is the certainty next year of a greatly-increased importation, either in the shape of ores, or of copper itself. This avalanche of ores *will carry* Mr. Muntz's motion, and without a division; but, unquestionably, the distress at present in Cornwall will continue, and, perhaps, be augmented, unless the most vigorous measures be taken to improve the smelting of the home ores. The practice of assaying for copper only, instead of making frequent analyses of the ores, has latterly been most unfortunate for Cornwall. I can state with confidence, that the sulphur in combination with metals, and which is nearly always present in the Cornish ores, would, if converted into vitriol, frequently raise the value of the ores 12*s.* per ton, which is more than equivalent to the duty on the highest per centage of foreign ore; and many thousand tons of ore that are now thrown away as waste, could be treated with great advantage to all concerned, if the sulphur were merely turned into vitriol, for which there is an unlimited demand in manufactures, and will soon be in agriculture. The process of roasting such ores in foreign countries is not new, and I am quite sure it has only to make a beginning in some suitable locality, for Cornwall to be as thickly studded with vitriol chambers, as Lancashire, or Lanarkshire, is with cotton-mills.—W. BIRKMYRE: *Devonport, June* 10.

REPEAL OF THE COPPER ORE DUTIES.

SIR,—Much good will result from your having called attention to the more prominent points of the controversy relative to the copper ore duties—a subject on which much misapprehension, if not ignorance, has prevailed. I believe many, besides myself, were under the impression, that the ores of Chili, and other countries, must, *of necessity*, be brought to this country to be smelted, and, therefore, we might as well levy a duty upon them for the advantage conferred. But it now appears that Chili has always been *a smelting country*; and that, even under the system of smelting here in bond, large quantities of ore were still smelted in that country, and the produce exported as pig copper, containing about 92 per cent. of fine copper—while, at the present time, the new smelting-works in Chili are producing copper as pure as that made at Swansea, and fit to be manufactured without further refining. These facts completely alter the case; and it is the greatest folly to continue the duty to the encouragment of smelting abroad; for all experience shows us, that we had better encounter the competition of the raw material at home, than the manufactured article abroad—for the latter will paralyse our smelters and manufacturers, and send down prices. I have said nothing relative to the works in the United States and elsewhere, though *these* have been called into existence by the duty, and I fear will not be stopped by taking it off. As to *protecting* our own mines, you disposed of this question last week, by asking, how we can protect them from foreign competition, seeing that so large a portion of their produce is sent for sale to foreign countries? This simple point ought to silence Sir Charles Lemon.—A SHAREHOLDER IN ENGLISH MINES: *London, June* 9.

SUPPOSED STRATA OF SUTTON COLDFIELD, STAFFORDSHIRE.

SIR,—If it be not intruding too much on your columns, thus to obtain information, I would beg leave to make the request of those of your readers who may be acquainted with the locality of the supposed strata which lies under Sutton Coldfield, which is between the mining district of Walsall, Bilston, &c., in the county of Stafford, and of Birmingham, in Warwickshire. It has been conjectured by some that coal exists, and by others it does not; but that the vein of the coal strata branches off on one side, and that, therefore, any sinkings commenced would turn out profitless. Knowing that numerous scientific men peruse your pages, I am led to hope some one or other may furnish the information requested.

Moorfield House, Handsworth. ——— CHARLES DEVEY.

THORNEYCROFT'S PATENT ANTI-LAMINATING RAIL.

SIR,—In the account, given in your Journal of Saturday last, of Mr. Thorneycroft's patent rail, railway engineers and the public generally are led to imagine that *all* rails "*manufactured on the old method*" are a mere aggregation of thin leaves or sheets of soft iron (as represented in fig. 1 of the communication above referred to), possessing comparatively little cohesion, and subject to easily splinter and rapidly decay. Now, as Mr. Thorneycroft's name is not attached officially, as it were, to this notice, it will be necessary to await the result of that gentleman's announcement of his discovery, before going into a critical examination of its merits and value; I shall, therefore, only observe at present that, with few exceptions, the "perfectly homogeneous body" of the heads of rails made in this mineral district (similar in sectional appearance to the head of fig. 2, in the notice alluded to), has generally been considered an objectionable point, on account of the *hardness* and *homogeneous nature* of the Welsh iron; upon what peculiarity, therefore, the patented discovery, or improvement in question consists, I am at present entirely at a loss to conceive. I make these few remarks, not by any means in disparagement of Mr. Thorneycroft's praiseworthy endeavours to improve the manufacture of rails, but to prevent erroneous impressions being made on the minds of railway engineers and others, as to ALL RAILS being made of soft and perishable iron, such as is described in the announcement to which I have before referred. The grand point in the manufacture of rails in this immediate neighbourhood, has been, for a very long time, to make the *heads* of them of the *hardest* or *strongest*, and their *bases* of the *toughest* or most *fibrous*, iron that locally can be obtained. With respect to rails made of soft Staffordshire iron, Mr. Thorneycroft's mode of manufacture will, decidedly, be a great improvement.—S. B. ROGERS: *Nant-y-Glo, June* 8.

COMMUNICATION BETWEEN GUARD AND ENGINE-DRIVER.

SIR,—If a chain were used as a means of communication between the guard and engine-man of a train, as suggested by a correspondent in your Journal of the 5th inst., other persons in the train might avail themselves of the same plan for stopping the train, which, in many instances, would be highly dangerous. I would, therefore, suggest that a small electrical telegraph be placed in each guard's van, which is always the last carriage in the train, and, through this powerful auxiliary to science, numerous means for conveying the necessary and simple instruction to stop, might be given to the engine-man. An electrical telegraph, such as would be required in this case, would cost only a trifle.—C. H.: *Warrington, June* 7.

IRON BRIDGES.

SIR,—The late fall of the iron bridge over the Chester and Shrewsbury Railway will suggest many plans for the erection of those structures, combining strength and safety with moderate cost of construction. Why might not the plan of the late Mr. Davies Gilbert be adopted?—viz.: the right angle triangle being the strongest form of given quantities of matter, let the girders be cast of such shape, and of sufficient strength to withstand the weight, or force, which they may have to bear. With respect to the oxidating properties of the air and water, where every scale from a bar is a fraction of strength and a decimal of durability, every precaution should be adopted to prevent the action of those elements on corrosive metals. Your able chemical correspondents will, doubtless, be able to suggest a lasting paint, whereby the surfaces of railway works may be kept thoroughly protected from the effects of the atmosphere. A. T. J. MARTIN.

Penzance, June 8.

FLAP-VALVES FOR SEWERS—GALVANISED IRON.

SIR,—The proposition, by Mr. George Shepherd, C.E., for the application of the Vulcanized India-rubber as a flap-valve to prevent the egress of the effluvia and gases arising from sewers, &c., is so nearly similar to a plan which I intended to lay before the Society of Arts, three months ago, as in its general appearances to be scarcely distinguishable from it, excepting that my flap-valves are laid at an angle in a frame, instead of being rising and falling perpendicularly, and that the drop and throat are differently arranged. The material which I proposed to construct them of was galvanised iron, the flaps light but strong; something of this kind would effect the desirable object sought, and although there is much difficulty in inducing the Commissioners of Sewers to adopt even such a simple apparatus, yet the expense and the facility with which they can be applied would soon cause them to be generally adopted. W. SMITH.

Princes-street, Leicester-square, London, June 7.

IMPORTANCE OF MINERAL ANALYSIS.

SIR,—Mr. John Mitchell, in his letter on this subject, in your Journal of Saturday last, very truly observes, that "the province of the *assayer* is, to a certain extent, exceedingly limited—he merely having to assay a stone for lead, copper, silver, or any other metal, as he may be instructed—so that it is quite evident that, if an ore be sent to him to assay for copper, he assays it *for that metal only*, and there the knowledge of its contents is ended, as far as the assay is concerned." These just remarks are equally applicable to the examination of the ores of iron by assay—you may thereby approximate pretty nearly to the quantity of iron such ores may contain; but as to their residuums, no information whatever is given, although in iron smelting a knowledge of such residuums, both as to *nature* and *quantity*, is of the greatest importance.

I have been urging upon the attention of ironmasters, for full 30 years, the many advantages that would arise from the due analysis of *all the materials* used in the smelting-furnace. The aggregate loss of iron at large works—*many thousands of tons annually!*—in consequence of no attention being paid to the proper preparation of furnace mixtures, as *analysis* would clearly point out, would astonish those persons who may be unacquainted with the irregularities of iron furnaces under the present system, or rather non-system, of management; and it is nothing but the immense capital employed at such works that enables the proprietors of them to proceed with their operations over the drawbacks above-stated with comparative success and satisfaction. In conclusion, permit me to introduce a few extracts from my *Data for the Use of Blast-Furnace Managers*—a work originally written in the year 1818—to show that *analysis* is alone, in a manner, the sheet-anchor of an iron smelter; for, without a due and correct knowledge of the elementary constituents of his materials, and of their action and re-action in the furnace, it would be impossible for him to anticipate the production of any result whatever, except as a mere matter of chance. I would, at the same time, beg to observe, that the *true principles of iron-smelting* were, for the first time, submitted to the world in the publication above-mentioned—two series of which papers appeared in your very useful Journal several years ago. S. B. ROGERS.

Nant-y-Glo, near Abergavenny, June 7.

2d Letter.—"It may here be necessary to observe that, for the guidance of blast-furnace managers, a correct *analysis* should, at all iron-works, be made of the mines, and also of the limestones or other fluxes employed, and likewise of the coke and its ashes, in order to show the amount, number, and proportions of the earthy matters therein contained; for, unless an operative manager be made fully acquainted with the earths and oxides upon which he has to work, all his efforts will, at best, be built upon conjecture, and his results entirely the effect of chance."—"The earthy matters of the ore can only be ascertained by *analysis*; it is, therefore, quite impossible to give data on this head to suit, not only for any two works, but for even a single work, that could be depended upon for a whole twelvemonth together; repeated analysis of the iron-making materials at each separate iron-work should, therefore, be made whenever the slightest alteration appears in their quality."

3d Letter.—"A furnace-manager, who is generally restricted to the use of limestone for the fusion of his materials, will have to apportion that flux in his charges, to correspond with the *amount* and *nature* of the earthy matters of his mines and fuel, and which 'amount' and 'nature' can only be known by analysis."—"The result of hundreds of analysis has convinced me, that no two strata of limestone, enclosing the coal-field of Monmouthshire and South Wales, are exactly alike—indeed, stones worked out of the same stratum, or bed, seldom continue of the same quality for a year round. Here, again, the smelter can only safely find his way by means of analysis—all else will be mere guess work, and, therefore, quackery; from following which, countless thousands in value of money and material have been totally lost, both to ironmasters and the country at large."

4th Letter.—"To remedy this evil—*i. e.*, the use of an inadequate flux for bringing the earthy residuums of the materials used in blast-furnaces into perfect fusion *without the addition of protoxide of iron*—there is no other possibly safe and certain road for him to pursue than to repeatedly refer to the components of the materials upon which he (the furnace-manager) may have to operate, and that by analysis only; all other modes of proceeding will be merely guess-work, and, therefore, alike uncertain and unsafe."

7th Letter.—"Now, with regard to the analysis of materials for the use of the iron-smelter (and without which analysis all his processes will be pursued in the dark), the contents of his mines, limestones, coke ashes, and auxiliary fluxes—all in the state in which they are put into the furnace—should be correctly ascertained and duly tabulated for ready reference to at any time."

8th Letter.—"By the smelter obtaining a proper analysis of his materials, and by attending to the principle I have endeavoured to enforce—*i. e.*, to assort his mines and fluxes, so that the residuary earths shall readily fuse at the usual temperature of his blast-furnace into a clear and colourless glass, or cinder, *without the aid of protoxide of iron*—any furnace-manager may regulate his processes so as, at all times, to obtain *whatever iron result he may desire*. This has always been termed an *impossibility*—at least, by all the smelters of what may now be termed the old school—and very probably it will continue to be so considered, until the ironmasters will, as a body, hold out sufficient inducements to tempt individuals to properly qualify themselves, by a due course of education, for the important and responsible situation of blast-furnace managers."

MINERS' WAGES—AVERAGE GETTINGS.

SIR,—As a reader of your Journal for many years, I have observed several new theories broached from time to time by our commercial miners, and among other crotchets is that of average gettings. Nothing can be more fallacious as a test—average hardness of ground, work done in relation to the general expenses of the mine, and water charges, would be a far better criterion. Take two mines as similar as possible, being nearly adjoining, and which I give you from matter-of-fact just communicated.—In mine A 30*s.* per fm. is given more than in mine B. The miner in B says to A, "What are ye gitting, Tom?"—A answers, "We ba'ant allowed to git more nor 40*s.* a maunth; ef we do, 'em charge moor for mater'ls, and reduce un down." B replies, "We can git what us loike here a'ter setting day;" and it so happened, that the mine paying the lowest wages paid most per fm. Let any one compare the general cost of a mine with the actual amount paid for sinking and driving, and he will soon see that these "penny loaf for a penny" men "save snuffs and throw away whole candles." The physical stamina of the miner, as appeared by the turn out here of several thousands the other day, is rapidly declining, where air and food are supplied in quantities too small to support the healthy action of human life. A miserable expediency undermines our physical strength, our moral power, and spiritual energy—"Live and let live" is the only motto that will stand the test of time, and be conservative of man and his best interests.—A. T. J. MARTIN: *Penzance, June* 8.

EDUCATION IN THE COAL MINING DISTRICTS.

SIR,—Your paper has, for some months past, teemed with letters on the ventilation of mines, many of which afford sad proof of the absence of education, even among that class who are capable of writing to a newspaper, most probably "coal viewers;" while some few specimens of the correspondence enter scientifically into the causes of the evils complained of, and suggest rational and natural modes of cure. That the people of the coal districts are lamentably deficient in the most common elements of knowledge, the daily experience of those who live among them testify; nor is it confined to the miners—many who call themselves "agents" and "viewers," evidently do not know the constituents of coal; or, how is it we continually hear things called by wrong names? In every account in the local papers, relative to explosions in collieries, we are enlightened with the information, that "the *sulphur* exploded"—"a lad, going into a side heading with a candle, set fire to the *sulphur*, which killed," &c.—"the overman sent two boys down first to *brush away the sulphur*," &c.—and, it would scarcely be believed, in this age of the march of intellect, that agents, in their examinations on coroner's inquests, lay everything to the "sulphur." Now, Sir, your scientific readers know, that sulphur has little, or nothing, to do with it. The gas which causes those dreadful calamities, which we all deplore, is carburetted hydrogen, a chemical union of carbon and hydrogen, which, when mixed with about seven times its bulk of atmospheric air, becomes highly explosive; there may exist, in combination, some little sulphuretted hydrogen, but in that case the sulphur is united in the form of an acid, and does not partake, in the slightest degree, of the character, which the common term "sulphur" would lead the young and the ignorant to expect. Doubtless, efficient ventilation is the one thing needful for the safe, and even profitable, working of our coal mines; but to prevent the recurrence of explosions, we must have the assistance of the colliers themselves. Give the children of the coal districts a good common education, sufficient to lead them to *think*, and the mind to expand itself. On their first commencing to work in the pit, let them be taught the constituents of the substances they are likely to come in contact with—the nature of the dreadfully explosive gases, which every stroke of the pick disengages from the coal—the re-combinations which take place after an explosion—and the effects of the after-damp. Let them in early life have this little chemical knowledge impressed on their minds, and instead of the ignorant, reckless race of colliers, which disgrace the present day, the next generation would witness steady, thinking men, going to their subterranean labour with caution, and some degree of real science; and humanity be no longer shocked by the daily details of whole hecatombs of victims being offered up to the deities of ignorance and mammon. HYDRO.

Tipton, June 9.

ON VENTILATING AND WORKING OF COAL MINES.

SIR,—Your correspondent, "C. S. C." (Durham), does not, I am afraid, perfectly understand the situation intended to be held by the viewers I have proposed—therefore, I will endeavour to explain to him very briefly my meaning on that subject, notwithstanding he withholds his name. In a colliery, it is always expected there should be found a proprietor, who is conversant with the general principles of mining, both in practice and theory, possessed of a good and substantial education, personal abilities, quick forethought, and persevering ingenuity; or, should the same be held by a company, whose every subscriber is pursuing a different vocation, the acting manager is looked upon, in all cases, as having qualifications for such a responsibility, apart from the interest, or influence, of friends, and corresponding to those I have named in a proprietor. In the very numerous and extensive collieries of Lancashire, the former is generally the case, and the owner is found directly employed in the management of his works. It is very clear, then, that the system is under his immediate control, and every change, or progression, in the working, or ventilating, is carried on with his constant inspection. If his ingenuity produces any improvement, he first consults his viewer, whose good practical experience and suggestions will enable him to mature well the change to be desired; or, if the viewer be a man of shrewd, though unpolished, ability, he will continually be offering new plans and suggestions to the owner, who immediately brings theory to his aid, and solid considerations follow, which cannot fail to produce an improvement—so that, on every subject that presents itself for consideration, practice is always balancing theory. Thus, "the superintendence of a coal mine," is not placed exclusively "under a miner with scanty qualifications"; the theory, practice, and education of the proprietor—his book-learning, and general information—his interests, and knowledge of personal responsibility—are all brought to bear upon the viewer, who only acts in accordance with their united conclusions. It, therefore, matters not what "systems the viewer has been accustomed to see;" he can only be guided by that which obtains his master's, or acting manager's, assent. It is very desirable, that a proprietor should possess the information which a Mining Institute proposes to give, and absolutely requisite for those who have the viewers I propose—but, by establishing a general rule, that in all cases viewers shall be the educated "gentlemen" proposed by your correspondent (who, by the way, ventures only his initials), I should not expect to see proprietors devoting themselves exclusively to the management of their collieries, which would be impertative in the case I name, but employed in various other trades and professions, as nothing would seem required from them but the appointment of one of these "gentlemen" viewers from the Mining Institute, or elsewhere, and the cash requisite for the undertaking. Thus, the proprietor would have no responsibility, except the expenditure of the capital—feel no interest in the system, because he is occupied by other engagements—nor would he be able to correct the same, if he wished—and, in case of accidents, stand entirely aloof from any culpability that may arise from any defect in the same, by way of lack of attention, and other things, which *must* arise where the proprietor is known to be absent, or ignorant, or too easy and confiding; because he is aware, and the world is aware, that he has a viewer of known ability and education—in short, a "gentleman" in practice and theory. The viewer is thus assailed who possessed a plain education, and only a sufficiency of "trigonometry" to dial and plot the workings, and calculate the exact position of the same; and the public regard it as a national question, overlooking the effect it will have on the proprietors themselves, who may then be styled with the notorious appellation of "absentees." It may be urged, that many accidents have occurred under the viewers I support; but it was not with proprietors, a very few years ago, as it is now. The whole country, having been terrified by the repeated outrages committed by the explosions, regard the matter in a very different light, and are now very willing to place the careless incautiousness of the men individually upon the proprietor. A man may work in explosive gas without firing the same, if he has been accustomed to work in it; but, bring a new collier into it, who has never worked in the same, and the consequences hundreds have spent a life in bewailing. This is wanton and destructive management on the part of the viewer, and the proprietor, or acting manager; but take a case, which it is my own melancholy misfortune to relate, which occurred when your last publication was issuing from the press, and a more careless, or incautious, parallel cannot be found. At my colliery, near Chorley, six men and boys were engaged in what we term "pillaring," or clearing out the coal; two of them had completed their quantity, and gone up the shaft; presently, the remainder were joined by two others, who stated, that a small heap of rubbish had fallen into their "places," and they would, as it was Saturday, and wages' day, make out their quantity in the pillars left by the two above named. They commenced working all together, without setting a single prop, notwithstanding they had, in the morning of the same day, received a fresh supply from the viewer, who had been through the same place the evening before, and tried the roof, to see if it was at all dangerous. He, moreover, had, seeing their props a long distance from the face of the pillar, ordered them to remove the props then standing nearer to the face of the coal. At this time, they boasted to him, that "they durst sleep under it without props." After his leaving them, they (according to the evidence of a collier) had removed them altogether, and continued working without, when the consequence was, the roof fell in a mass, without warning, and killed four of them—two men and two boys—and dangerously hurt two of the others. The roof is composed of rock, and is the best that can be found upon any mines; and had they but the ordinary props set, they would have had ample warning to have gone out of the way. I had, in the same shaft, two men injured, at respective times, by the falling of the roof, under the same circumstances. They had been "drinking" for two or three days, and finding that their wages would suffer in consequence, would not stop to set the props, thinking the roof was so good, they might send a double quantity in the same time: the end is soon told—they were hurt severely, but speedily recovered. In such cases, how can the viewer prevent them?—or, how can the proprietor be palliated in such a manner, as to give him the satisfaction he is wanting? It is now only a few weeks ago since, in your columns, I stated, it was a pleasure to say, I had not experienced the loss of a single life in any of my collieries; but that enviable boast was no sooner written, than, in the face of any personal exertion, or earnest desire for caution and prevention, I am met in my own men, and under my own inspection, with the melancholy catastrophe I have just detailed. A correspondent of yours, last week, justly states—"It is beside the mark quite, to petition against the carelessness of men;" and I can, from experience, add, to caution, or restrain, them against a wanton, or careless wrong. Another correspondent suggests the erection of schools at every colliery; I would ask, how many children would go voluntarily?—and, further, if they would, should a child's education cease when he has reached his 10th year? Compulsion is found necessary in the factories—therefore, can it be expected to be otherwise with the children of the working collier? If, then, such a system must be made imperative, it would require mature consideration to prevent an arbitrary effect upon the collier; but where is there a more illiterate body of men than themselves?—or one with such abundant opportunities?—or the same time to devote to social improvements?—and yet so cruelly neglected? This, then, calls for a special, yet mild, interference; it may seem a trifling matter to legislate for them, but it will be found a particular and important deliberation. To Lord Ashley, and our other great philanthropists, there is open a field of gross ignorance, of which I should say there is not a more consummate specimen in the kingdom. Much has been done for the factory children, by giving them time for a social amelioration; but here is an immense class of men, women, and children, without education, and, I may nearly add, civilisation—a class possessing more time, that they can call their own, than any other labourer in the land, and well paid withal for the time they do labour. Surely, this is the prize object for the philanthropist! I have received a private letter from Mr. Storey, which I have replied to; and if Mr. Storey remains true to his first proposition, I shall have pleasure, at a future time, in laying the result before your readers.

Having explained this matter, in accordance with my views, to the public, I shall, on future occasions, trespass less on your valuable columns

hoping that other gentlemen of practice and experience, will not withhold the information they have accumulated, and the conclusions they have arrived at, affecting this most important subject; and, at the same time, add weight and influence to their opinions, by attaching their names in full.

Alison Hall, near Chorley, Lancashire, June 3. J. DARLINGTON.

GOVERNMENT INTERFERENCE IN MINES.

SIR,—I had a clear notion what was veiled beneath the vague expressions, proceeding from the north on Government inspection, but I am cautious of mere surmise, and like the object to be revealed. Balanced and inconsequent sentences, without dividing premises from conclusion, are used most when the concealed object is most personal, and that which I before supposed, one correspondent this week has explained. He asks, whence will the Government inspectors be provided; he imagines the Government will *not go to Lancashire*. No! the Athens of coal-fields—Newcastle—whence, certainly, not the best letters on ventilation have been dated, must supply this public benefit. In that happy spot, and its vicinity, are "young gentlemen" in multitudes, at three in the morning, who go down coal pits—a nursery of lively shoots, ready for transplanting through the kingdom. The soil whence these are set, ready to yield more, will furnish again its interesting harvest, under the instruction of the young idea by "Dominie's" and "Drs." I have the very best wishes for young gentlemen, and their successful prospects; but I scarcely can consent that the whole mining interest is to be taxed per ton to find them situations. If intellect has overstocked the market of the north, the legitimate remedy is to breed a less supply. In that case we should see less painful anxiety for the state of *the working collier*, though certainly they would lose the disinterested supply of petitions. I respect the geological reputation of Sir H. De la Beche, and Dr. Lyon Playfair's acquirements, and believe they have performed the task of their reports as well as men of general avocations can accomplish an impossible business. There is a model for public documents, one necessarily like another, and it is a difficulty in these days of great publicity to find leisure for accurate thinking on a question of much scope; this may prove an excuse for my quoting the following passage, and for the commissioners writing it—"Proper persons being appointed as superintendents (and, if improper, their deficiencies will soon become apparent, and their removal the consequence)." What! is this boon of our inspection to resemble Buller's reformation of the Puritans?

> "A work that must be carried on—
> For ever doing, yet never done;
> As if *inspection* were intended,
> For nothing else but to be mended."

This is exactly the result that I pointed out some weeks past *must* follow on legal experimentation—each change will have to be amended, and each amendment will make the matter worse, until the last state of these things is worse than the first. Where is to be the court of appeal for these "deficiencies?" If inspection have any object, it is *conclusive* to provide us a controlling authority, a resource in difficulties, something *better* than ourselves. Give us the authority that is to decide upon insufficient inspectors, and we shall consent to submit to be unprovided with the latter.

It is, therefore, *absolutely* contemplated to provide incompetent agents, and turn our works to trial places for "young gentlemen's" abilities, to be removed after proof of their capacity for mischief. "Very well meaning young man—very hard upon him—has a sister dependent on his prospects—quite an oversight," &c.—so, out of pure benevolence, another inspectorship will be provided somewhere else to try if his *incompetence* be *improved*. Are fire, air, and water, so peopled with the denizens of Government patronage, that we must be burdened with a gnomadic race?—and the *places* being peopled in the light of day, must it be commenced, yet living, to make men appointments underground?

I am certain the common sense of the mining interest will make a stand on the proposal; and the same faculty of the Legislature will see the propriety of it; and it cannot be too strongly condemned that views are in contemplation for disturbing the position of master and collier, by introducing among us that faction on education which distracts the State. Well might the first of political economists exclaim to his monarch—all manufactures need, is to be let alone—"*Protect us from friends.*" A petition has been carried about amongst the colliers; why should the owners not petition likewise? If that most highly indefinite of all terms—"education"—have the magic virtues attributed to it, it follows, convincingly, that the educated owners know better than the uneducated colliers can do their own and each other's interests. It is, therefore, highly inconsistent to get ignorant men to sign a petition, maintaining them to be so; nor can you expect those who, for the pleasure of the act, will make their names across a book you lend them, or anywhere else, can refuse to sign, when told they are to be highly ameliorated by "young gentlemen."

The proposal which Mr. Storey offers, for the appointment of one or two *authoritative* inspectors—similar to the inspectors of railways—I have myself been revolving; and I have thought there might be combined with this the office of coroner—at least, in those accidents which happen by explosion. A coroner is often a lawyer, whose small practice makes it worth while to accept the office, and can possess no practical details to guide a jury; and we know how much the last required it. A juryman, last summer, the most experienced and respectable of the body, stated to me personally, he feared it would be necessary "to put a *donation*"—meaning, of course, *deodand*—upon the boiler; and their ideas are as confused as their language. Competent *engineers* and *coroners*, and *even judges*, urging the strictest penalties for proved neglect, might, perhaps, do much good. The districts should be so appointed as to comprise a *variety* of modes of working, to enhance his competence of decision. One inspector, or coroner—I wish to be slow in even naming novelties—might take the north and Lancashire; a second, the midland district; and the appointment of the third, comprise the principality, with, if needed, Devon and Cornwall. I subjoin the sketch of a petition—hints to those who have more competent abilities for enforcing them.

That your petitioners view with alarm vague proposals for appointing Government inspectors to mines—to enforce which, petitions have been prepared, and circulated. That there is no difficulty in obtaining signatures from persons in the class of the working collier, by promising a prospective benefit for the act of writing a name. That the working of coal is naturally attended with danger and difficulty, in common with navigation at sea, and other pursuits. That if due examination be made of the danger attendant on getting coal in deep shafts, and extensive excavations, yielding inflammable air, explosive and destructive as gunpowder, with other deleterious gases, the hazards in extracting measures, varying from less than 2 ft. to more than 30 ft. in thickness, under the enormous pressure of superincumbent strata, with risk from great bodies of water in subterranean springs, and considering the vast quantities of heavy matter raised by ascent and descent, through depths of several hundred yards, with rapid and complicated machinery, necessary to effect a combination of objects, it will be found, that in proportion to the multitude employed, and the hours of labour, the casualties are less than in any other dangerous employment. That an explosion, involving loss of life, in a peopled district at peace, and in apparent safety, is most distressing to humane feelings, and justly so; but that your petitioners deprecate attempts to create therefrom undue prejudice against them, and to make such calamities available to interested parties, to introduce faction between master and collier. That such attempts can only breed ill-will, and divert attention from the true sources of mischief, and their proper remedy. That the best modes of working mines are not thoroughly agreed on, even by practical men, and, therefore, the greatest caution is necessary in legislating on them. That there is a variety of energy and capacity in all men, and some works must have the disadvantage of inferiority in their management; but to make laws for all, by the standard of the worst, will be unjust and deteriorating. That your petitioners will not object to any measures devised to stimulate the negligent, if such negligence is proved; but they have never seen a proposal for inspection, which had the slightest promise of being effective, and request, therefore, great consideration before framing changes, which may prove pernicious as well as futile, &c., &c.

"Measure twice and cut once," is an old proverb of compendious import. What connection, may I ask, has Mr. Thomas Duncombe with mining?—is it because much coal is burnt in Finsbury? D. MUSHET.

Gloucester, June 2.

HYPOTHESES ON IRON.

SIR,—In answer to "Ferreus," the crucible I employed in my experiments was of common Stourbridge clay, coated internally with pure carbon (ignited lamp black), so that the outer clay merely acted as a support for the inner charcoal crucible; it will, therefore, be evident that the iron I submitted to experiment was in contact only with carbon. The black-lead crucible, mentioned by Dr. Ure, cannot mean a Hessian crucible; it merely means a clay crucible, into whose composition a considerable quantity of black lead enters—so that it has great analogy to the charcoal crucible I am in the habit of using. I shall be glad to receive the samples which "Ferreus" is so kind as to promise me, and I will take the earliest opportunity (compatible with my professional engagements) to examine and report upon their relative values as to carbon, as well as any other samples I may receive.

"Ferreus" has, I think, misunderstood my statement as to the existence of the metalline alloys in the ores submitted to the blast furnace. It is impossible that they can pre-exist in the ore; but, when it does contain the oxides of the metals in question, the latter, present in the reduced iron, are derived from the alumina, lime, &c., existing in the ore, and not from the limestone added in the course of the operation. I may mention that the term alloy is used by chemists in reference to mixtures of metals, and not to mixtures of their oxides, or other compounds—the chemist recognising no mixtures of bodies, excepting the metals as alloys; therefore the metalline alloys cannot pre-exist in the ores, because the latter contains no metals in that state which is generally understood as metallic, but only in the state of oxide.—JOHN MITCHELL: *Hawley-road, June* 7.

CHESTER AND SHREWSBURY RAILWAY BRIDGE.

RESPECTED FRIEND,—I was certainly much surprised to learn that this bridge was constructed with cast-iron beams, or girders, upwards of 96 ft. long, and only 3 ft. 9 in. deep. I am not aware of their particular form; but, for illustration sake, let it be supposed that they are parallel beams, 96 ft. long, and (say) 4 ft. deep, with flanges on each side of the top and bottom, projecting (say) 6 in.—the whole averaging in thickness 2 in.—this would make the sectional inches equal to 144 inches. Let it now be supposed, that the beam, or girder, be 96 ft. long, 4 ft. deep, containing 144 sectional inches, which would be one superficial foot in every inch of its length, the weight would be about 20 tons. Now, that weight in such a beam would occasion a pressure at the middle of 240 tons; the engine and load of (say) 30 tons, uniformly spread over the whole length, would occasion an additional pressure of 360 tons; and suppose the ballasting, timber, rails, &c., to be 20 tons, this would further add a pressure of 240 tons. I imagine two of these beams, made to sustain these several loads—the weight of which to be 20 tons each, or 40 tons; the pressure occasioned by their own weight at the middle to be 480 tons; the engines, carriages, &c., 30 tons, equal to 360 tons; ballasting, 20 tons, equal to 240 tons—making, together, a strain, or pressure, at the middle of upwards of 1000 tons! Now, let us see what is the capacity of such beams. As the lower half of the beam is the part that sustains the tention, and the upper half the compression, effects of the load, we have in both beams 144 tension sectional inches; then suppose the tension of cast-iron to be equal to about 10 tons to the inch—although I think about 8 tons a safer calculation—this would give a sustaining power to the breaking point of nearly 1500 tons. According to Tredgold, such a beam ought not be loaded for perfect safety with more than one-fourth of its capacity—Barlow allows one-third. Assume the latter, then the safe load, *including their own weight* for two such beams, would be a pressure of about 500 tons—whereas it appears that the beams of the Chester Bridge sustained a pressure of upwards of 1000 tons, or more than double Barlow's safety proportion, and two-thirds of the actual power of *perfectly sound beams*, which, I think, is steering too close to the wind. As to trussing a cast-iron beam, or girder, by means of wrought-iron, that appears to me to be almost useless, which I conceive must be apparent to ordinary capacity, if rightly considered; for, let it be supposed, the beams in question to have strong wrought-iron bars passing from the upper corner of each end, and united together at the middle of the lower part, then load it so as to produce deflection on the middle, and then submit the same beam to the same test, without the wrought-iron; and, if I am not mistaken, there will be very little difference for this simple reason—the suspending bars being attached to the upper corners of the beam, when the deflection takes place in the middle, the two corners move correspondingly towards the centre—thus allowing the middle of the lower part to sink. I am, therefore, of opinion, that Gen. Pasley in this respect is right, and that his talented opponents are wrong. As to the blaming the Government authorities, for requiring bridges of considerable span to accommodate navigation, I think it would be much more reasonable, and much nearer the truth, to have blamed engineers for using in tension the very objectionable material—cast-iron. Wrought-iron ought never to be tested beyond half its presumed capacity; nor cast-iron beyond one-third, for fear of elongating the former, and of producing permanent injury to the latter.—THOMAS MOTLEY: *Bristol*, 6 *mo.* 10.

LAMPS.

SIR,—A communication in your last Journal is a vague attempt to make "the worse appear the better reason." It is admitted, by your correspondent, that not a few of so-called "safety lamps" were projected by him, and, if not abandoned in succession, what has become of them, or where are they *now* severally employed? or, do they belong to several degrees of comparison? It is admitted, that the lamp exhibited before the Commons' Committee did not pass through the ordeal successfully, and was put *hors de combat*. The test was under skilful direction, and Upton and Roberts' safety lamp withstood that test. It is not denied that the *principle* in the last projection is IDENTICAL with that of Muesseler. It may be quite true that Muesseler's lamp is more rude in its construction, and less highly polished, than its counterpart—it is the PRINCIPLE which is the question at issue. I am no umpire in that of PRIORITY of invention; the parties must settle that affair between themselves.

The sneer of your snarling correspondent—"theoretically, of course, for we never hear he makes any experiments"—I consign to sovereign contempt. I have been an experimentalist, Sir, all my life long, and have laboured more assiduously at the bar of experiment, in the laboratory, &c., than my antagonist can pretend to. The public has long ago assigned me full credit for being a successful experimenter, and, at any rate, your correspondent is not qualified to impugn the verdict. I must leave him, however, to settle accounts with "An Owner of One of the Collieries," &c., and "Veritas." I shall not disturb his self-complacency again, since I cannot administer an opiate to his irritability. J. MURRAY.

Portland-place, Hull, June 9.

[ERRATA.—In the Waste Lands of Ireland, read *fence*, not hence, *Montfacon* and *Marenne*.]

BIRAM'S OBLIQUE PADDLE-WHEELS.

SIR,—Will you allow me space to correct a wrong impression which Mr. Walkinshaw has imbibed, as to the extra breadth which would be required at the after extremity of the wheels of my oblique paddles. The accompanying sketch shows the outline of a vessel—the half A being fitted with the common paddle, and B with the oblique paddles, by which it will be seen, that the breadth of the vessel at the aft extremity of the wheel, is not intended to exceed that required by the ordinary paddle. The wheel, from being so narrow, admits of being supported in a most substantial manner at the inside; whilst the outside framing would only be necessary to protect it from coming in contact with other vessels, piers, &c. B. BIRAM.

Wentworth, May 31.

RAILWAY COMMUNICATION BETWEEN EDINBURGH AND LONDON.—As soon as the Newcastle and Berwick Railway is opened, the whole distance between the two capitals of England and Scotland, by express trains, will be accomplished in 13 hours.

CRIMPLE VIADUCT.—This magnificent viaduct will, when completed, form one of the most wonderful of the achievements of science in railway construction in the kingdom. Its massy towering piers are now all reared, and its lofty expansive arches, stretching their wide concavities across the deep glen, will shortly be brought to a close. Those of our readers who may be unacquainted with this structure, may feel somewhat interested by a brief description of its situation, and an accurate admeasurement of its gigantic form. It situation is about a mile to the south-east of Harrogate; it is intended to convey the Harrogate and Church Fenton line of railway across the Crimple Valley. The viaduct consists of 31 arches, each of 52 ft. span, and the loftiest are 130 ft. in height. The piers on which they rest, 32 in number, are about 20 ft. each in thickness at the base, and are composed of immense blocks of hard granite. The top of each pier, immediately beneath the springer, is 8 ft., and the quoins 4 ft. in thickness. The abutments are thickly flanked, and joined by lofty embankments. The line at the south end is carried through a long deep tunnel; while at the opposite extremity it proceeds along a deep rocky cutting. The whole length of the masonry is about 1656 ft. Between the first and second buttresses at the south end runs the line of the Leeds and Thirsk Railway, which is carried along the mountain side a considerable distance, and afterwards thrown across the vale by another viaduct, which, however, appears very diminutive compared with the one described above. The part of the valley over which the monster viaduct is thrown, is a beautiful and romantic little defile between two high rocky mountains, whose steep and rugged sides are covered with a profusion of heath, brushwood, and other kinds of vegetable life, indigenious to the mountain soil.—*Harrogate Herald.*

AITKEN'S IMPROVEMENTS ON THE STEAM-ENGINE.—Mr. J. Aitken, of Newman-street, has taken out letters patent for an important improvement in the steam-engine, by constructing what he terms an atmospheric cylinder placed either over the air-pump, or in any other convenient situation which may be fixed upon, with the view of easing the load on the latter, which is very serious in all engines. Through this atmospheric cylinder all the condensing water passes on its way to the condenser; atmospheric pressure is thus given to the piston, and the load of the air-pump counteracted. The action of the air pump abstracts a considerable portion of the power of every description of condensing engine during the space the load is on; but in direct action, or pumping-engines particularly, where there is no fly-wheel to equalise the load, the advantage of the atmospheric cylinder will be great; for steam, equal to the load of the engine, and of the air-pump, must be supplied from the beginning to the end of the stroke. Supposing the air-pump to be 34 in. in diameter, the pressure on the piston would be 12,700 lbs. at each stroke. Mr. Aitken estimates, that the use of the atmospheric cylinder will give power to that extent; and the check of the air-pump being counteracted, the engine will work more steadily, and more safely. Another advantage of this additional cylinder is, that it extracts the air from the water on its way to the condenser, before it becomes expanded by the heat of the steam; and the lowest benefit observed from this cause, was an improved vacuum in the condenser to the extent of three-quarters of an inch of mercury. A greatly-increased quantity of water may be admitted to the condenser without inconvenience to the engine, the atmospheric cylinder giving power to discharge it from the air-pump in proportion to the quantity passing through it. The principal advantages arising from the application of the new cylinder are estimated as follows—viz: 1. The steam cylinder is relieved of the load of the air-pump.—2. The vacuum of the condenser is greatly improved.—3. The movement of the fly-wheel, or the momentum of a steam-boat, is rendered much more steady, on account of the resistance of the air-pump at each revolution, being counteracted by the atmospheric cylinder.—4. In cases where the condensing water can be brought in a pipe from a height, the power of the engine may be increased in proportion.—5. It will obviate the difficulty sometimes experienced when the condenser is too hot to supply itself with water—and, 6. In marine-engines, there will be great advantage from the supply of condensing water, being in exact proportion to the speed of the engine. The entire gain, upon the average, from the application of the new cylinder, is estimated at 22½ per cent.

CUNNINGHAM AND CARTER'S ATMOSPHERIC RAILWAY.—This is a plan of railway propulsion which, taking the atmospheric system for its basis, works out the details of transit in a manner totally different, we believe, to any thing yet attempted. The carriages run upon lines of rails laid down as usual; but their propulsion is effected through the medium of "traction rails," which are attached to, and carried along with, the carriages themselves, and derive their motive power from being brought into contact with the peripheries of a succession of revolving horizontal wheels, and placed in sets of three each, at distances of about 300 ft. apart—one wheel being placed outside of each line; and the third, between the two lines—and all three connected by bands, and put simultaneously in motion by horizontal air-engines, connected with the main or vacuum tube. The patentees claim as advantages, that the propelling wheels shall always run free of the rails on which the carriages run—that the number of revolutions of the propelling wheels, and the degree of adhesion, may be increased or diminished at pleasure—that the starting of the trains one after another may be so regulated, independently of the drivers or guards, that it shall be impossible for one train to overtake and come in collision with another—that the same train may be moved in either direction without any change of position being requisite—and that the cost of working and maintaining the same and the carriages shall be much lower than any carrying establishment on the locomotive system.

CLAASEN'S IMPROVEMENTS IN RAILWAYS AND CARRIAGES.—The object of these improvements is, to render it next to impossible for a train to run off the rails, or for any serious catastrophe to result from the breaking of an axle. For this purpose, he places in the centre of each pair of rails a centre rail, much more elevated than the two side rails, and attaches to the bottom of each carriage one or two sets of rollers, one placed horizontally, so as to come in contact with the upper surface of the centre rail in the event of an axle breaking; the other two placed vertically one on each side of the centre rail, to prevent the carriages swerving to either side. These rollers run always free of the centre rail, except any accident occurs, or the making of a sharp curve brings them into action. This centre rail, the outer rails, and the sleepers, are all strongly tied, and fastened together by mortices, tenons, and iron plates, at intervals; the rollers are accurately turned, and have their bearings in brasses, firmly screwed to the timbers; and the whole is so arranged, that either in the event of the breaking of an axle, or a tendency to run off the rails, the centre bar may act as a complete safe-guard. Much sharper curves, too, may be run over by this arrangement, as the centre rail would counteract the danger arising from the centrifugal force.

TIRES OF RAILWAY WHEELS.—The following remarks have been communicated by a correspondent ("X. Y. Z."), to the *Railway Record*:—"It was given in evidence, at an inquest recently held to decide upon the fatal results of an accident which occurred on the Great Western Railway, that the fracture of the steel tire of the driving-wheels of some of their locomotives was by no means an unusual occurrence, and that even those tires sometimes snapped when the engines were not running. The dreadful effects of the accident in question make it evident that nothing should be omitted by which risk may possibly be mitigated; and to this end, among, probably, many better suggestions, I beg to offer the following, both as respects the cause and its removal. These steel tires are dovetailed into the iron wheel; and being let in hot, it appears to be assumed that the sledge hammers of the forgers will cause the two metals—steel and iron—to become properly welded together. Now this, Sir, I venture to dispute; on the contrary, I am convinced nothing like a real cementation of the two metals will be effected. If this assumption be correct, it necessarily follows that the iron felloes of the wheel will be surrounded by a distinct steel hoop. Now, the transverse section and body of hoop is very small, compared with that of the felloes, or iron rim, of the wheel—consequently, under the enormous pressure of a Great Western locomotive, the steel hoop will have a tendency to *roll out* longitudinally more than the iron rim of the wheel; and, so rolling out or stretching, it must either fracture the felloes, or the iron rim itself, if it is let into its dovetailed bed very tight; or it must become somewhat larger in diameter than the felloes of the wheel. If this latter be the result, we know that the wheel and the steel tire cannot, without a jerking back of the tire, make the same number of revolutions in any given distance. A tire so enlarged, on an iron wheel, will, when the wheel is in revolution with a heavy load upon it, be rolled down tight into its bed at all points behind that of its contact with the rail; and, at all points before that, it will be thrown partly up and forward out of its bed, by so much as it is larger in diameter than the felloes of the wheel. But when, from any cause—such as an increase of speed, or at some portion of its bed where the steel rim fits tighter—this kind of slipping of the larger outer rim on the smaller inner one, can no longer be maintained, the outer, that is the steel rim, must snap, and its fractured pieces frequently fly off with great force. But it is stated that these tires sometimes snap when the engine is not in motion. Here the laws of expansion and contraction, probably, come into action. Supposing a steel tire not to have been rolled out, as previously assumed, in running; then, when the engine comes to a state of rest, the wheel will begin to discharge into the atmosphere the extra amount of heat it has acquired during its rapid journey; and, though the contractive forces of iron and steel are, in like conditions, nearly the same, yet, the tire being the outside, will cool faster, and contract at first more than the body of the wheel; and hence it will be likely enough to snap, particularly when the hardness of the steel is considered. The converse of all this even might account for the flying off of these tires when running, without supposing there were any rolling out of the metal under the enormous load of the engine, with all its *hammering* on the rails. Now, if the cementation of the steel tire and the iron felloes of the wheel were perfect, the risk of all such accidents would seem to be obviated; and this occasions me to mention, that I some time back observed that a patent had been taken out by a Sheffield gentleman—I think of the name of Sanderson—for welding a steel plate, of sufficient thickness, on an iron bloom, and then rolling out into bars. In fact, it seemed to me that this was a plan for plating iron with steel, precisely on a similar method with that of plating copper with silver, as long practised in the well-known Sheffield plated ware. I have not been in the way of learning whether this patent has been successfully worked out; but it appears to me it might be well worth the while of any railway company using steel tires to inquire."

EXPORTS OF COALS, METALS, &c.

The following is an account of the declared value of the exports of the principal articles of British and Irish produce and manufactures, in the three months ended 5th April, 1847, compared with the exports in the two preceding years:

Articles.	1845.	1846.	1847.
Coals and culm	£161,457	£220,800	£174,215
Hardware and cutlery	496,357	522,306	517,457
Machinery	126,146	329,230	307,712
Metals—Iron and steel	558,614	795,433	907,923
,, Copper and brass	417,972	290,664	430,173
,, Lead	44,367	29,467	41,617
,, Tin, unwrought	11,625	10,338	30,139
,, Tin-plates	129,328	157,556	98,944
Salt	32,464	38,057	59,728

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